Preface

The 2001 Minority Health Report, from the Office of Minority Health, provides a comparison of the leading causes of death among racial and ethnic groups in Indiana with national data and the goals and objectives of Healthy People 2010. The following report presents the top 10 leading causes of death for each racial and ethnic group. In total there are 15 leading causes of death presented. Each cause is presented with a short review of the disease, progress tables of mortality rates for Indiana from 1995 to 1999, differences between race and ethnic groups, and a comparison of Healthy People 2010 targeted to that of national and Indiana mortality data.

The information provided in this report is intended for health professionals, students, legislators, and other interested parties in the health status of minorities in Indiana.

Primary resources used for this report were Indiana Mortality Database, Centers for Disease Control and Prevention, Healthy People 2010, National Center for Health Statistics, Census Bureau, and the National Center for Injury Prevention and Control.

The intent of this publication is to provide information to assess the changing health status of the community, to develop resources and interventions in areas of need, and to improve modifiable health risk factors for adverse health conditions. Through these changes, the Indiana State Department of Health will work toward its goal of 100% access to health care for all and eliminating health disparities.

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TECHNICAL NOTES

Age –Adjusted Death Rate- When comparing rates over time or across different populations, crude rates (the number of deaths per 100,000 persons) can be misleading because differences in the age distributions of the various populations are not considered. Since death is age-dependent, the comparison of crude rates of death can be especially deceptive.

Age adjustment, using the direct method, is the application of age-specific rates in a population of interest to a standardized age distribution in order to eliminate differences in observed rates that result from age differences in population composition. This adjustment is usually done when comparing two or more populations at one point in time or one population at two or more points in time. (National Center for Health Statistics (NCHS).

The direct method of adjustment was used to produce the age-adjusted rates for this report. In this method, the population is first divided into reasonably homogenous age ranges, and the age-specific rate is calculated for each age range; then, each age-specific rate is weighted by multiplying it by the proportion of the standard population in the respective age group. The age-adjusted rate is the sum of the weighted age-specific rates. Further information regarding the calculation of age-adjusted rates can be found in The Methods and Materials of Demography by Henry S. Shryock, Jacob S. Siegel and Associates, U.S. Department of Commerce.

Age adjustment by the direct method requires use of a standard age distribution. The year 2000 population replaces the 1940 U.S. population for age adjusting mortality statistics. The 2000 standard population also replaces the 1970 civilian noninstitutionalized population and 1980 U.S. resident population, which previously had been used as standard age distributions for age adjusting estimates from NCHS surveys. The year 2000 standard has implications for race and ethnic differentials in mortality. (National Vital Statistics Report, Volume 47., Number 3)

Cause of Death Classification- According to the NCHS, the International Classification of Diseases (ICD) is the classification used to code and classify mortality data from death certificates. NCHS serves as the World Health Organization (WHO) Collaborating Center for the Family of International Classifications for North America and in this capacity is responsible for coordination of all official disease classification activities in the U.S. relating to the ICD and its use, interpretation, and periodic revision.

The death statistics presented in this report were compiled in accordance with the WHO regulations, which specifies that member nations classify causes of death by the current International Classification of Diseases, Injuries and Causes of Death, Ninth Revision (ICD-9) for the years 1995-1998. For 1999 and beyond, the current causes of death were coded using the International Statistical Classification of Diseases and Related Health Problems Tenth Revision (ICD-10).

Data Limitations- Lack of consensus when defining and measuring race and ethnicity leads to limitations. Particular rates in this report are based on a small population size, a small number of deaths, or both. The rates based on small numbers may be unstable due to random variation, and should be used with caution. For rates based on 20 or fewer deaths, the data is considered statistically unstable and thus valid comparisons are not possible.

INTRODUCTION

MISSION

The Indiana State Department of Health's (ISDH) mission is to promote, protect, and provide for the public health of people in Indiana. Because of ISDH commitment to enhancing public health in Indiana, ISDH uses the Healthy People 2010 goals to improve health within the state.

WHAT IS HEALTHY PEOPLE 2010?

Used by various entities, Healthy People 2010 is a set of health objectives for the nation to achieve during the first decade of the 21st century. Many different people, states, communities, professional organizations, and others follow it to help develop programs that will improve health. Healthy People 2010 was "developed through a broad consultation process built on the best scientific knowledge and designed to measure programs over time." Healthy People 2010 was designed to achieve two goals; "Increase Quality and Years of Healthy Life" and "Eliminate Health Disparities."

ELIMINATING HEALTH DISPARITIES

Racial and Ethnic Disparities- Racial and ethnic disparities have increased in the areas of education, income, occupation, fertility, and health status. The role of race in determining the health status of Americans is an attempt to answer the questions of how and why such disproportionate race-based health differences exist. Due to changes in population composition, new research about the disparities in health status among racial and ethnic groups, and increased advocacy and activism for socially disadvantaged groups, cultural competence is more in demand and essential in order to deliver adequate and complete care to all patients.

ISDH has responsibilities designated by the Minority Health Initiatives; *Indiana Code 16-46-11, which states:*

The state department of health shall do the following:

(1) Developing and implementing a state structure more conducive to addressing the health disparities of minority populations in Indiana.

Examples of ISDH implementing this law are providing assistance to local communities to obtain funding for the development of a health care delivery system to meet the needs, gaps, and barriers identified in the local plans. Research within minority populations. Develop and implement culturally and linguistically appropriate health promotion and disease prevention programs.

The ISDH wants every person in Indiana to have access to health care and achieve his or her optimal health. Due to its dedication to eliminating disparities, the ISDH commissioned this report to show the existing health disparities among the different racial/ethnic communities in Indiana. The report compares Indiana's leading causes of death with the nation's leading causes of death and Healthy People 2010 objectives to decrease the rising numbers of certain diseases. Also, you will see the progression of each leading cause of death in Indiana through 1995-1999.

GOAL

This report focuses on the leading causes of death for each racial and ethnic minority group and the gap that stands between each group. The goal is to inform the public health field and the general public of these health gaps and to indicate how successful Indiana is in influencing change that will reduce health disparities.

United States Leading Causes of Death, 1999

National Vital Statistics Report, Vol. 49

Cause of Death/ ICD 10 Codes	Rank: Total	AfrA/B	AI/AN	AA/PI	White	H/L
Heart Disease I00-I09, I11, I13, I20-I51	1 725,192	1 78,574	1 2,404	1 9,096	1 635,118	1 25,866
Cancer C00-C97	2 549, 838	2 61,951	2 1,836	2 8,813	2 477,238	2 20,233
Cerebrovascular Disease I60-I69	3 167,366	3 18,884	5 546	3 3,109	3 144,827	4 5,907
Chronic lower respiratory disease/ COPD J40-J47	4 124,181	6 7,915	7 406	6 1,125	4 114,735	8 2,859
Unintentional Injuries/ Accidents V01-X59, Y85-Y86	5 97,860	4 12,728	3 1,327	4 1,560	5 82,245	3 8,650
Diabetes E10-E14	6 68,399	5 11,927	4 725	5 1,148	7 54,599	5 5,182
Influenza & Pneumonia J10-J18	7 63,730	10 5,876	8 315	7 845	6 56,694	9 2,246
Alzheimer's Disease G30	8 44,536	- 2,342	- 86	- 231	8 41,877	- 981
Nephritis/ Kidney Disease N00-N07, N17-N19, N25-N27	9 35,525	9 6,711	- 194	9 579	9 28,041	- 1,584
Septicemia A40-A41	10 30,680	- 5,826	- 169	10 398	- 24,287	- 1,215
Suicide X60-X84, Y87.0	- 29,199	- 1,950	9 291	8 658	10 26,300	- 1,695
Cirrhosis/Chronic Liver Disease K70, K73-K74	- 26,259	- 2,833	6 513	- 293	- 22,620	6 2,972
HIV/AIDS B20-B24	- 14,802	7 7,893	- 68	- 89	- 6,752	- 1,958
Homicide X85-Y09, Y87.1	- 16,889	8 7,648	10 253	- 360	- 8,628	7 2,864
Conditions during perinatal period P00-P96	- 14,259	- 5,150	- 138	- 323	- 8,648	10 2,153

AfrA/B= African American/ Blacks
AI/AN= American Indian/ Alaska Native
AA/PI= Asian American/ Pacific Islander
H/L = Hispanic/ Latino

Indiana Leading Causes of Death, 1999

Indiana Mortality Report, 1999

Cause of Death	Rank Total	AfrA/B	AI/AN	AA/PI	White	H/L
Heart Disease I00-I09, I11, I13, I20-I51	1 16,734	1 1,188	1 12	2 22	1 15,505	1 126
Cancer C00-C97	2 12,788	2 996	2 5	1 32	2 11,743	2 87
Cerebrovascular Disease I60-I69	3 3,965	3 281	4* 1	5 4	3 3,676	4 30
Chronic lower respiratory disease/ COPD J40-J47	4 3,014	7 147	4* 1	6* 3	4 2,862	8 13
Unintentional Injuries/ Accidents V01-X59, Y85-Y86	5 2,252	6 192	3 2	3 6	5 2,047	3 54
Diabetes E10-E14	6 1,609	4 206	4* 1	4 5	6 1,395	5 22
Influenza & Pneumonia J10-J18	9 1,024	- 59	4* 1	6* 3	8 958	- 9
Alzheimer's Disease G30	7 1,163	- 49	- 0	10* 2	7 1,111	- 7
Nephritis/ Kidney Disease N00-N07, N17-N19, N25-N27	8 1,047	8 119	- 0	10* 2	9 924	- 8
Septicemia A40-A41	10 766	10 75	4* 1	- 0	10 689	9* 11
Suicide X60-X84, Y87.0	- 621	- 39	4* 1	6* 3	- 577	- 8
Cirrhosis/Chronic Liver Disease K70, K73-K74	- 439	- 36	- 0	6* 3	- 400	9* 11
HIV/AIDS B20-B24	- 109	- 34	- 0	- 0	- 75	- 3
Homicide X85-Y09, Y87.1	- 380	5 194	4* 1	10* 2	- 180	7 17
Conditions during perinatal period P00-P96	- 320	9 79	- 0	- 1	- 237	6 18

AfrA/B= African American/ Blacks
AI/AN= American Indian/ Alaska Native
AA/PI= Asian American/ Pacific Islander
H/L = Hispanic/ Latino

* = Cause of Death Numbers are Tied

RACE AND ETHNICITY CATEGORIES

The Office of Management and Budget (OMB) chooses the standards for the classification of federal data on race and ethnicity. OMB's predominant mission is to assist the President in overseeing the preparation of the Federal budget and to supervise its administration in Executive Branch agencies. In helping to formulate the President's spending plans, OMB evaluates the effectiveness of agency programs, policies, and procedures, assesses competing funding demands among agencies, and sets funding priorities. OMB ensures that agency reports, rules, testimony, and proposed legislation are consistent with the President's budget and with Administration policies.

The minimum categories for data on race and ethnicity for Federal statistics, program administrative reporting, and civil rights compliance reporting are defined as follows:

- **American Indian or Alaska Native.** A person having origins in any of the original peoples of North and South America (including Central America), and who maintains tribal affiliation or community attachment.
- **Asian.** A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam.
- **Black or African American.** A person having origins in any of the black racial groups of Africa. Terms such as "Haitian" or "Negro" can be used in addition to "Black or African American."
- **Hispanic or Latino.** A person of Cuban, Mexican, Puerto Rican, Cuban, South or Central American, or other Spanish culture or origin, regardless of race. The term, "Spanish origin," can be used in addition to "Hispanic or Latino."
- **Native Hawaiian or Other Pacific Islander.** A person having origins in any of the original peoples of Hawaii, Guam, Samoa, or other Pacific Islands.
- **White.** A person having origins in any of the original peoples of Europe, the Middle East, or North Africa.

Race:

- **American Indian or Alaska Native (AI/AN or former AI/EA)**
- **Asian (A or former A/PI)**
- **Black or African American (AA)**
- **Native Hawaiian or Other Pacific Islander (NH/PI or former A/PI)**
- **White**

Ethnicity:

- **Hispanic or Latino**
- **Not Hispanic or Latino**

The provisions of these standards are effective immediately for all **new** and **revised** federal data record keeping or reporting requirements that include racial and/or ethnic information. All **existing** record keeping or reporting requirements shall be made consistent with these standards at the time they are submitted for extension, or not later than January 1, 2003.

*Note: In 1995-1999 the data were collected by combining Asian and Native Hawaiian or Pacific Islander categories to make the (A/PI) category as will be seen in the leading causes of death graphs.

DEFINITIONS

Angina Pectoris- A severe, sudden, and intense pain in the chest associated with an insufficient supply of blood to the heart.

Arteriosclerosis- A chronic disease in which thickening, hardening, and loss of elasticity of the arterial walls result in impaired blood circulation.

Asphyxia- A condition in which an extreme decrease in the concentration of oxygen in the body, accompanied by an increase in the concentration of carbon dioxide leads to loss of consciousness or death. Choking, drowning, electric shock, injury, or the inhalation of toxic gases can induce asphyxia.

Atheroma (atheromatous)- A deposit or degenerative accumulation of lipid-containing plaques on the innermost layer of the wall of an artery, especially on one of the larger arteries.

Atherosclerosis (atherosclerotic)- A form of arteriosclerosis characterized by the deposition of atheromatous plaques containing cholesterol and lipids on the innermost layer of the walls of large and medium-sized arteries.

Alveolus (Alveoli)- A tiny, thin-walled, capillary-rich sac in the lungs where the exchange of oxygen and carbon dioxide takes place.

Benign- Tumors that are not cancerous. The cells from benign tumors do not spread throughout the body.

Gestation- The period of development in the uterus from conception until birth; pregnancy.

Hemorrhagic- relating to a hemorrhage.

Hemorrhage- Excessive discharge of blood from the blood vessels; profuse bleeding.

Homicide- The intentional killing of one person by another.

Hypoxia- A deficiency in the amount of oxygen reaching body tissues.

ICD 9- ICD 10 codes- The International Classification of Diseases (ICD) is designed to promote international comparability in the collection, processing, classification, and presentation of mortality statistics**.** The 9th revision covered 1979-1998. The 10th revision covers 1999- present.

Malignant - Tumors that are cancerous. Cells in these tumors are unusual and divide without control. These tumors can spread cancer throughout the body and damage nearby tissues and organs. Malignant tumors can not only cause morbidity, but death as well.

Morbidity- Any departure, subjective or objective, from a state of physiological or psychological well being.

Mortality- Death, especially of large numbers; heavy loss of life.

Prevalence- The total number of cases of a given disease existing in a population at a specific point in time.

Tumor- An abnormal growth of tissue resulting from uncontrolled, progressive multiplication of cells and serving no physiological function.

Source: *The American Heritage® Dictionary of the English Language, Fourth Edition* and *Webster's Revised Unabridged Dictionary, © 1996, 1998 MICRA, Inc.* and the *National Center for Health Statistics.*

ICD 9: 402, 410-414, 429 **ICD 10: I11, I20- I59**

HEART DISEASE

Review

Heart disease is the leading cause of death for every race, ethnic group, and gender in the United States. In Indiana, it mirrors the same except in the Asian/Pacific Islander population. The American Heart Association has identified several risk factors for coronary heart disease. Those pertaining to non-lifestyle characteristics are increasing age, gender, and heredity. Individual risk factors that spur from lifestyle habits include smoking, high cholesterol, high blood pressure, physical inactivity, and obesity.

Coronary heart disease (CHD) is the single largest killer of American males and females. (American Heart Association) Atherosclerotic narrowing of the coronary arteries causes coronary heart disease. Even though cardiovascular mortalities are decreasing, morbidity and mortality rates remain high. This is of great concern to clinicians and health officials.

Data Summary

In the U.S. in 1999, CHD caused 529,659 deaths, or 1 out of every 5 deaths. There are differences in treatment outcomes for patients who have heart attacks. Females, in general, have poorer outcomes following a heart attack than do males: 38 % of females who have a heart attack die within a year, compared with 25% percent of males (American Heart Association). At older ages, females who have a heart attack are twice as likely as males to die within a few weeks. Complications are more frequent in females than in males after coronary intervention procedures, such as angioplasty or bypass surgery, are performed.

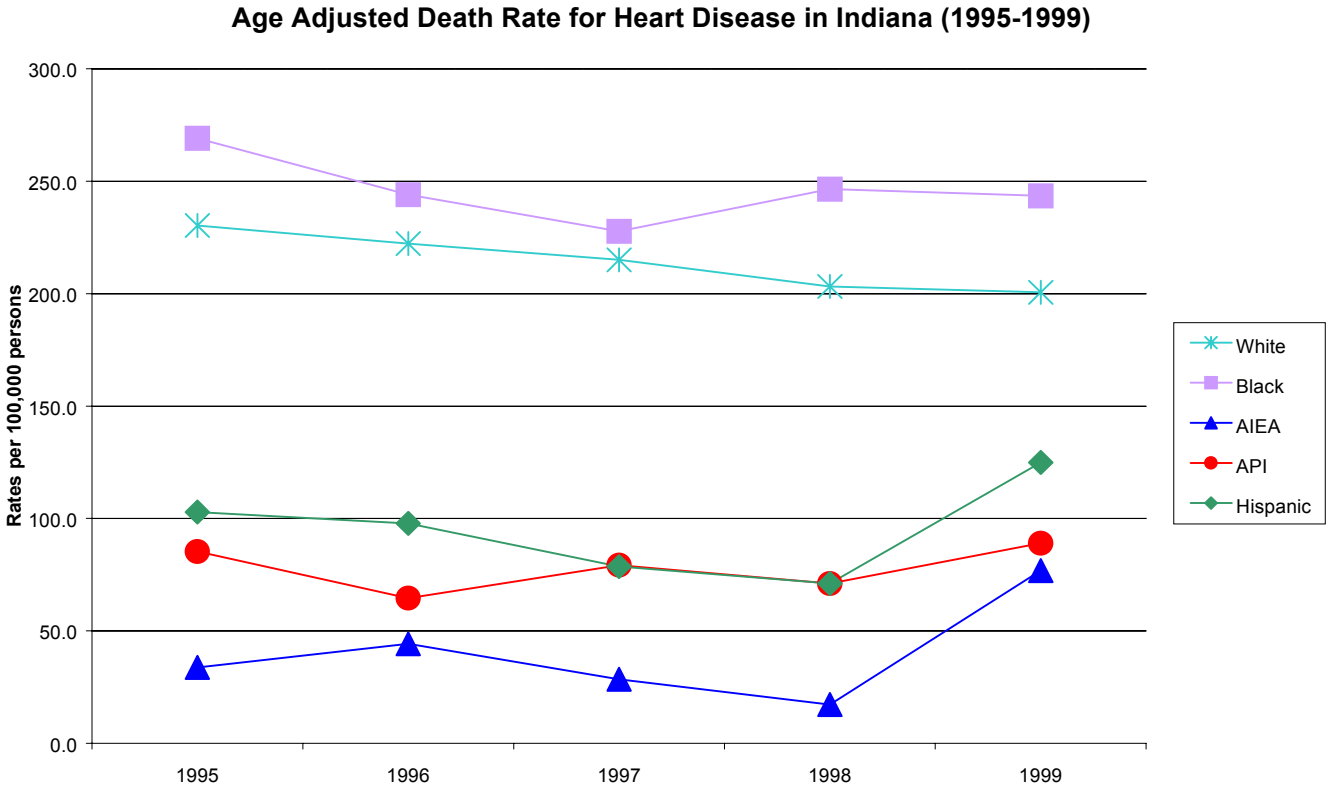

Figure 1.1

Comparisons- Race/Ethnic Group

According to the American Heart Association, in 1999 national coronary heart disease death rates were 249.4 per 100,000 people for White males and 272.6 for Black males; and 152.5 for White females and 192.5 for Black females. CHD death rates were not as high for Native American Indians/ Alaska Natives, 123.9 per 100,000, 115.7 was the rate for Asian/ Pacific Islander, and 138.4 for Hispanics. High blood pressure is known as the "silent killer" and remains a major risk factor for coronary heart disease. Statistically, men generally have higher death rates for heart disease. When looking at minorities, Black or African Americans rank the highest for heart disease for both males and females. Most research has shown that Blacks or African Americans are more genetically prone to heart problems. Genetics contribute to an individual's risk for heart disease, high blood pressure, and stroke. The following graph shows the difference in mortality rates for Indiana minorities within the United States.

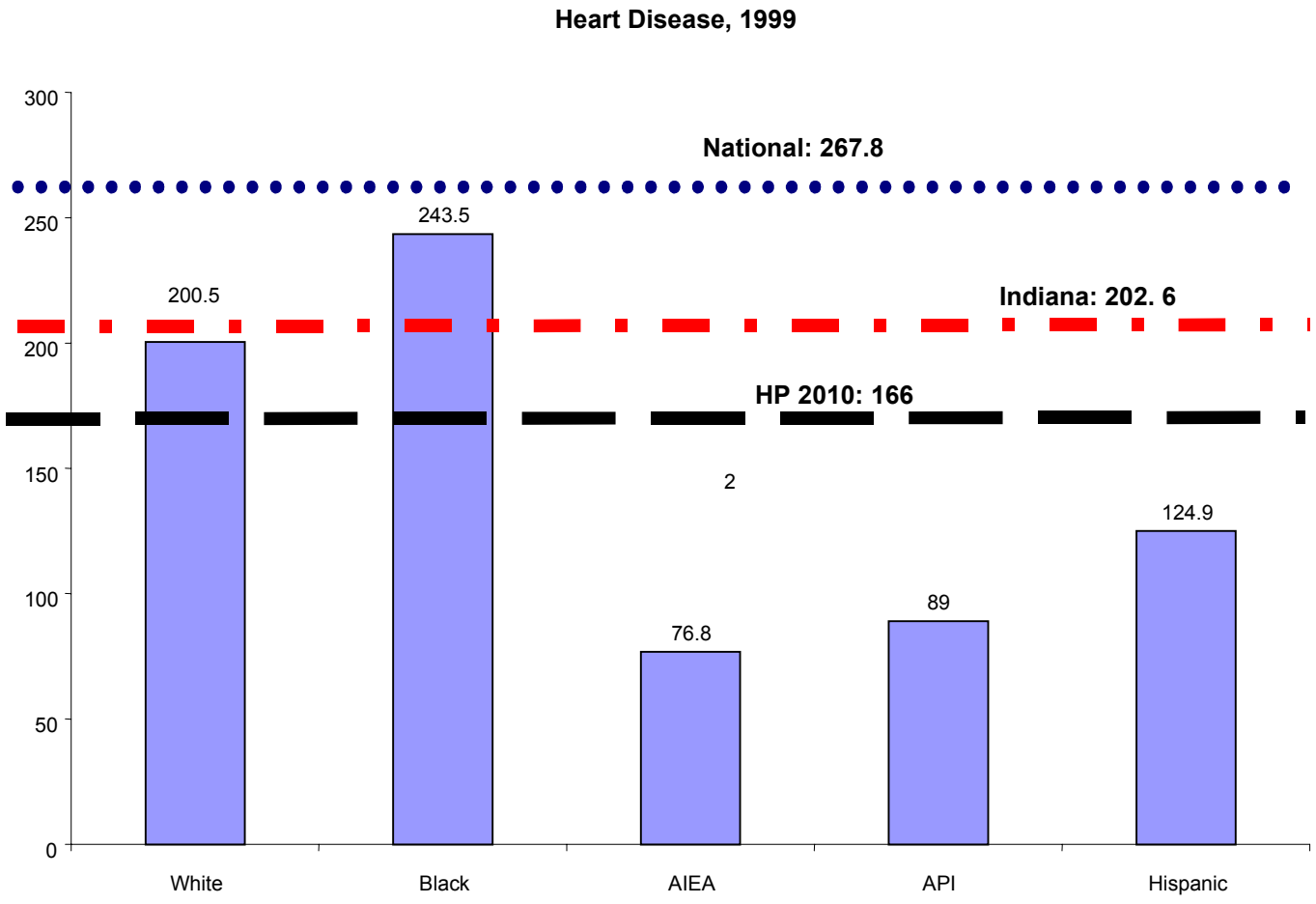

Figure 1.2

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound
* Indiana and US are age adjusted to 2000 standard population
* Hispanic is an ethnicity and it includes all races

ICD 9: 140- 208 **ICD 10: C00- C97**

MALIGNANT NEOPLASMS (CANCER)

Review

Cancer is a group of diseases that begins in cell development. Normal cells grow and divide to produce more cells only when necessary. Abnormal and uncontrolled cell division is when cancer can occur in the body. When cells keep dividing, they form tumors. Tumors can either be benign or malignant.

There are 4 different kinds of cancer:

- Carcinoma- the most common type of cancer, occurs in the cells that cover external and internal body surfaces (i.e., lung, breast, colon)
- Sarcomas- occur in cells found in the body's supporting tissues. (i.e., bone, cartilage, fat, connective tissue, and muscle)
- Lymphomas- occur in the lymph nodes and tissues of the immune system
- Leukemia- occur in immature blood cells that grow in bone marrow and tend to accumulate in large numbers in the bloodstream

Data Summary

As of 1999, the United States deaths annually due to cancer were 549,838. Cancer is the second leading cause of death for the nation as a whole and for each racial and ethnic group. The following are the top 5 leading cancer sites along with the estimated number of new cancer cases[1] in Indiana for 1999:

- Breast cancer (female): 3,900
- Uterine cervix cancer: 300
- Colorectal cancer: 3,000
- Prostate cancer: 3,700
- Lung cancer: 4,300

Age Adjusted Death Rate for Cancer in Indiana (1995-1999)

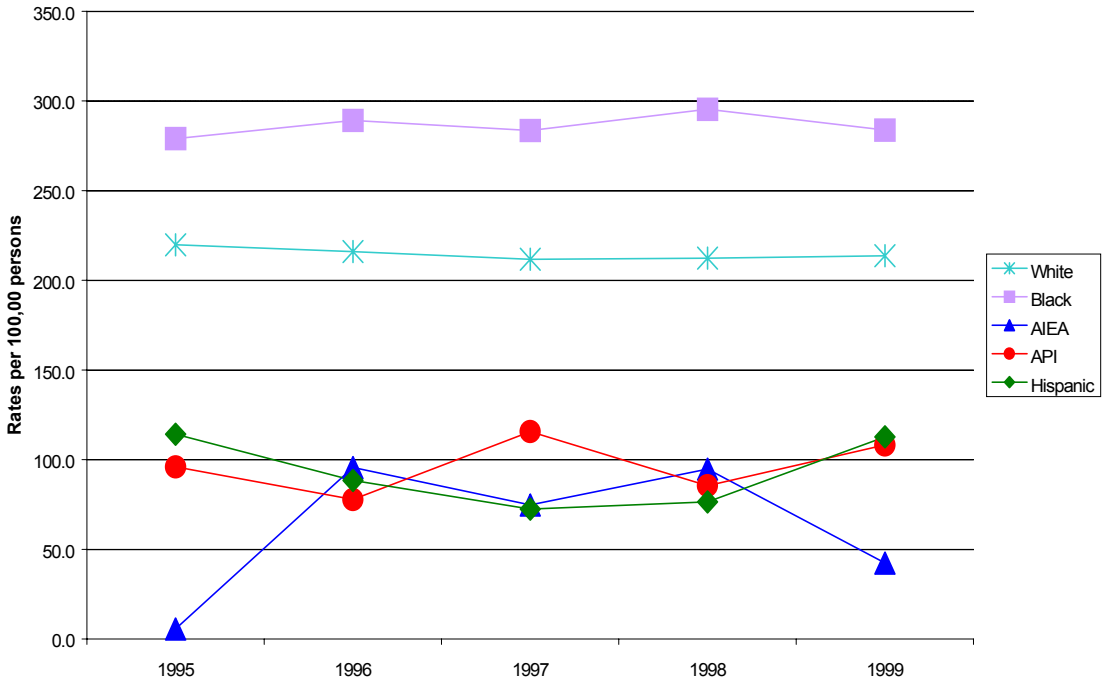

Figure 2.1

[1]*American Cancer Society, Surveillance Research, 1999*; Note these estimates are calculated according to the distribution of estimated 1999 cancer deaths by state.

Comparisons- Race/Ethnic Group

Cancer rates among different racial and ethnic groups vary among themselves and also within each other. Mortality rates are lower than incidence rates for breast cancer. The highest age-adjusted mortality rate occurs in Black women, followed by White women (National Cancer Institute). Black women are generally diagnosed with breast cancer in the later, less treatable, stages than other races. For Asian /Pacific Islander women, higher incidences of breast and cervical cancer occur more than any other cancers. Chinese and Japanese American women have higher rates of breast cancer than their counterparts in their home countries. In 1999, the United States top three cancers in White and Black males were prostate, lung/bronchus, and colon/rectum. Black males have a 35% higher cancer rate than White males. When examining White and Black females, the top three cancers were breast, lung & bronchus, and colon/rectum.

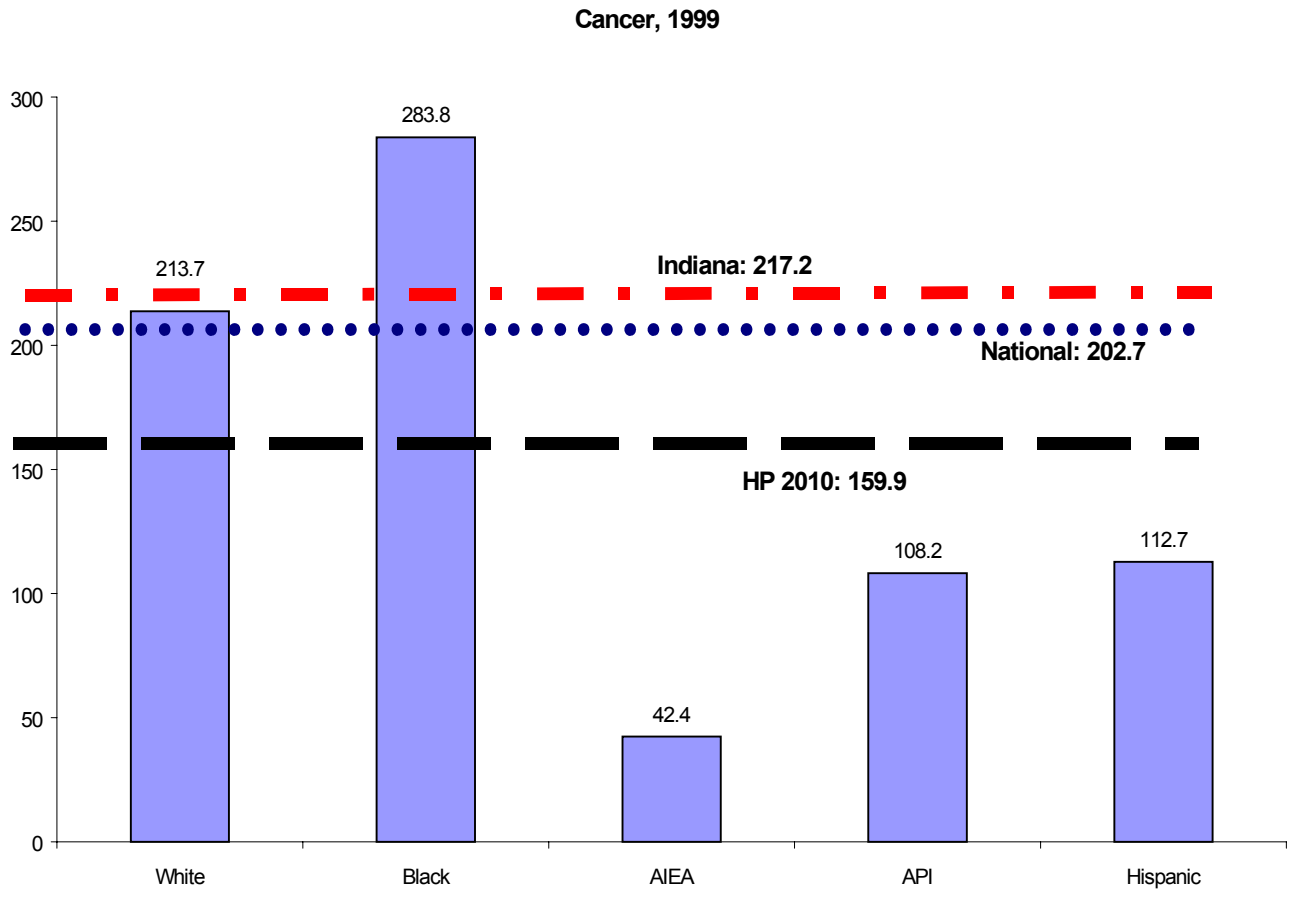

Figure 2.2

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* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

ICD 9: 430-438 **ICD 10: I60- I69**

CEREBROVASCULAR DISEASE (STROKE)

Review

According to the American Stroke Association, every 53 seconds, someone in America has a stroke. Stroke is a major cause of disability. The effects of a stroke can include paralysis, problems with assessment, problems with communication and emotional distress. Patients may also experience pain or numbness after a stroke. (National Institute of Neurological Disorders and Stroke). Stroke symptoms appear suddenly:

- Sudden numbness or weakness of the face, arm, or leg (especially on one side of the body)
- Sudden confusion or trouble speaking or understanding speech
- Sudden trouble seeing from one or both eyes
- Sudden trouble walking, dizziness, or loss of balance or coordination
- Sudden severe headache with no known cause

Ischemic strokes, the most common type of strokes, can be treated with a drug called t-PA that dissolves blood clots obstructing blood flow to the brain. The window of opportunity to start treating stroke patients is three hours, but to be evaluated and receive treatment, patients need to get to the hospital within 60 minutes. A five-year study by the National Institute of Neurological Disorders and Stroke (NINDS) found that some stroke patients who received t-PA within three hours of the start of stroke symptoms were at least 30 percent more likely to recover with little or no disability after three months.

Data Summary

According to the National Center for Health Statistics (NCHS), in 1999 167,366 people in the United States died of stroke. The chances of having a stroke increase with age. Two-thirds of all strokes occur to people over 65. Studies show that the risk of stroke doubles with each decade past age 55. Another interesting demographic is that males have a slightly higher stroke risk than females. But, because women in the United States live longer than men, more stroke survivors 65 and older are women. This also means that more women than men will die of stroke.

Age Adjusted Death Rate for Stroke in Indiana (1995-1999)

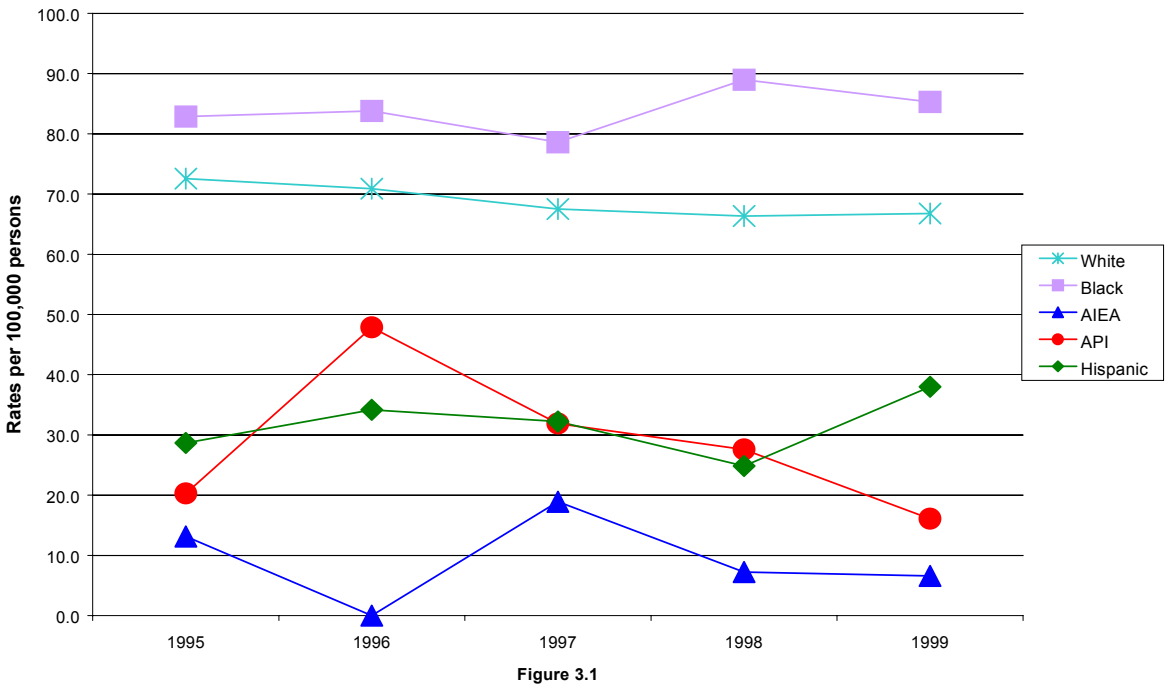

Figure 3.1

Comparisons- Race/Ethnic Group

African Americans/Blacks have a higher stroke risk than other racial groups. The national stroke death rate in 1999 for Black males was 87.4 per 100,000 and 78.1 per 100,000 for Black females. Black men and women are more likely to die from stroke than their White counterparts. When comparing age and race, at the age range of 35–54, Blacks are at a risk four times greater than Whites for stroke. Native American Indians/Alaska Natives follow at two times higher, trailing are both Asian Americans/ Pacific Islanders and Hispanics/Latinos tied at 1.3 times higher[2].

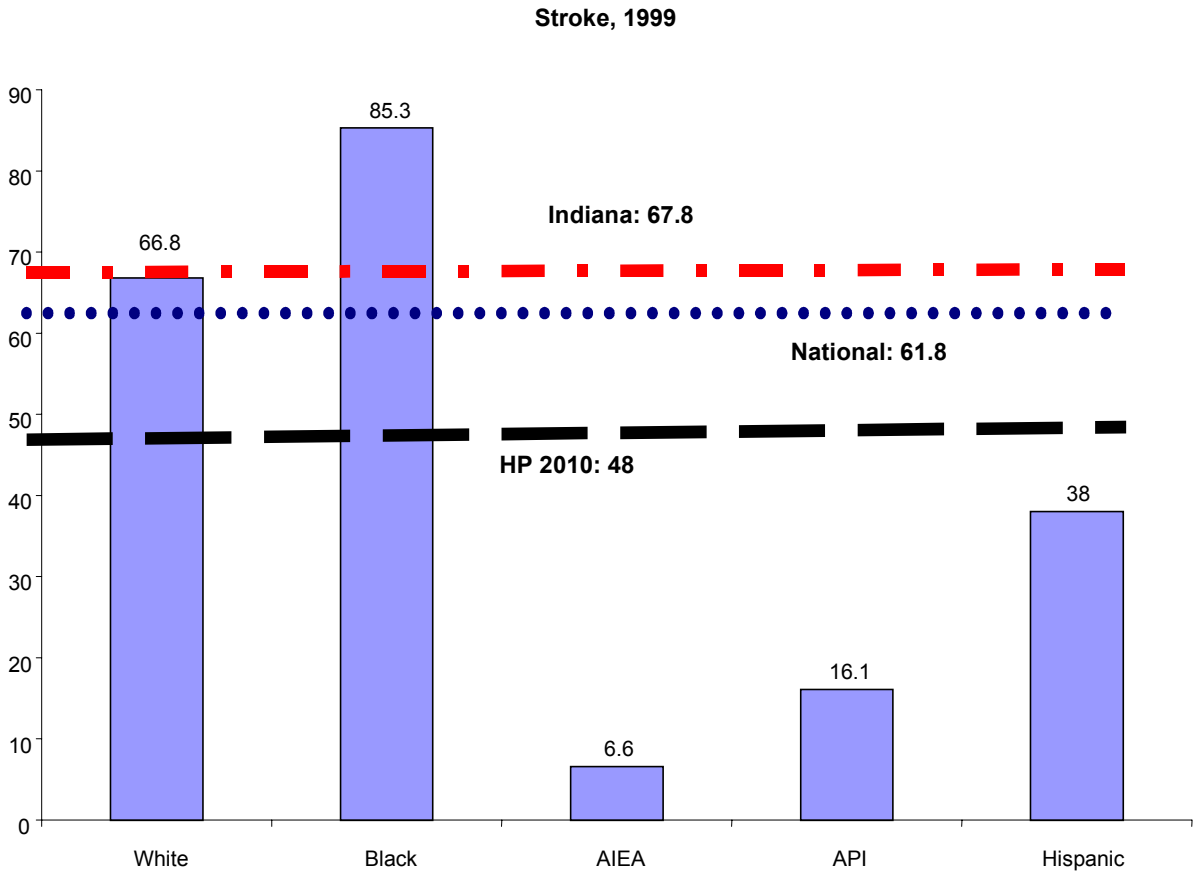

Figure 3.2

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* Hispanic is an ethnicity and it includes all races

[2] *American Stroke Association, Statistics; Cardiovascular Disease, 1999;*

ICD 9: 490-496 **ICD 10: J40- J47**

CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)/CHRONIC LOWER RESPIRATORY DISEASE (CLRD)

Review

Chronic obstructive pulmonary disease (COPD) includes three similar diseases; chronic bronchitis, asthma, and emphysema. COPD is a disease perceived to be an irreversible airflow obstruction. COPD develops when the walls of the small airways and alveoli lose their elasticity. COPD worsens as it progresses. It may start as shortness of breath or a slight cough. But over time it turns into a severe cough, breathing becomes harder which makes the heart work harder, and not enough air can get to the lungs.

COPD occurs mostly in older people. Most patients with COPD have a history of cigarette smoking. Most studies show that 80 to 90 percent of COPD cases are related to smoking. That is not to ignore the fact that all smokers do not develop COPD.

Data Summary

It is important to note that ICD 10 classification of COPD is different than ICD 9. In ICD 9, COPD only included two diseases emphysema and bronchitis. The new ICD 10 adds asthma and renames the condition to Chronic Lower Respiratory Disease (CLRD). COPD numbers, from 1999 and beyond, may reflect these differences. In 1999, 124,181 people in the United States died of COPD. This high occurrence has made COPD the 4th leading cause of death in the nation with a death rate of 45.8 per 100,000 people. Males have a higher rate of COPD/CLRD, but ironically in 1999, females had a higher rate of asthma than males.

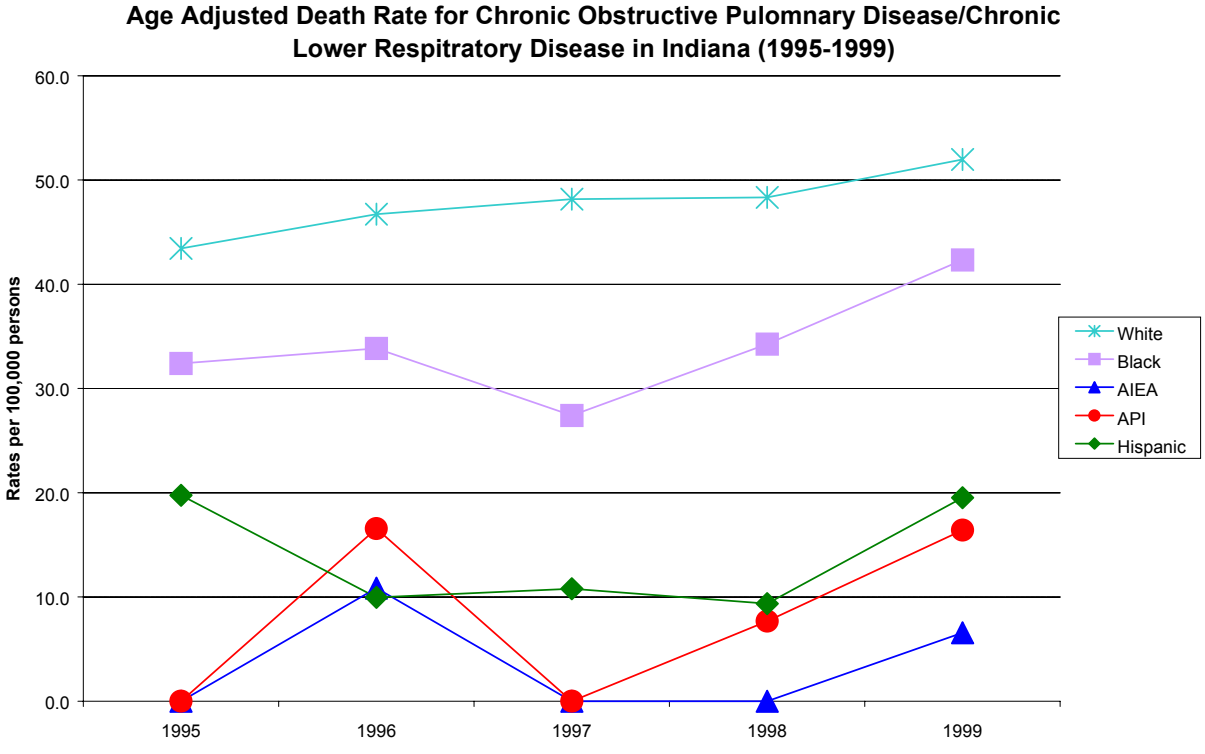

Figure 4.1

Comparisons- Race/Ethnic Group

As noted earlier, smoking is one of the highest risk factors for COPD/CLRD. The American Lung Association has reported that nationally, in the minority community, the prevalence of smoking is highest among Native American Indian and Alaska Natives (34.1 %). After which African Americans follow (26.7%), Whites (25.3%), Hispanics or Latinos (20.4%), and Asian Americans/ Pacific Islanders (16.9%). Smoking is also a dominant factor in high rates of other lung conditions within minority communities.

The COPD/CLRD death rate per 100,000 population in the United States is highest among Whites, 51.1. For African American/Blacks it is 22.7, Native American Indians/Alaska Native are at 21.4, Asian Americans/Pacific Islanders are next with 10.4, and trailing are Hispanics/Latinos at a low rate of 9.1. According to the American Lung Association, COPD/CLRD is the only lung disease in which Whites are profusely affected, and the only lung disease type in which the age-adjusted death rate for Whites exceeds that for Blacks nationally.

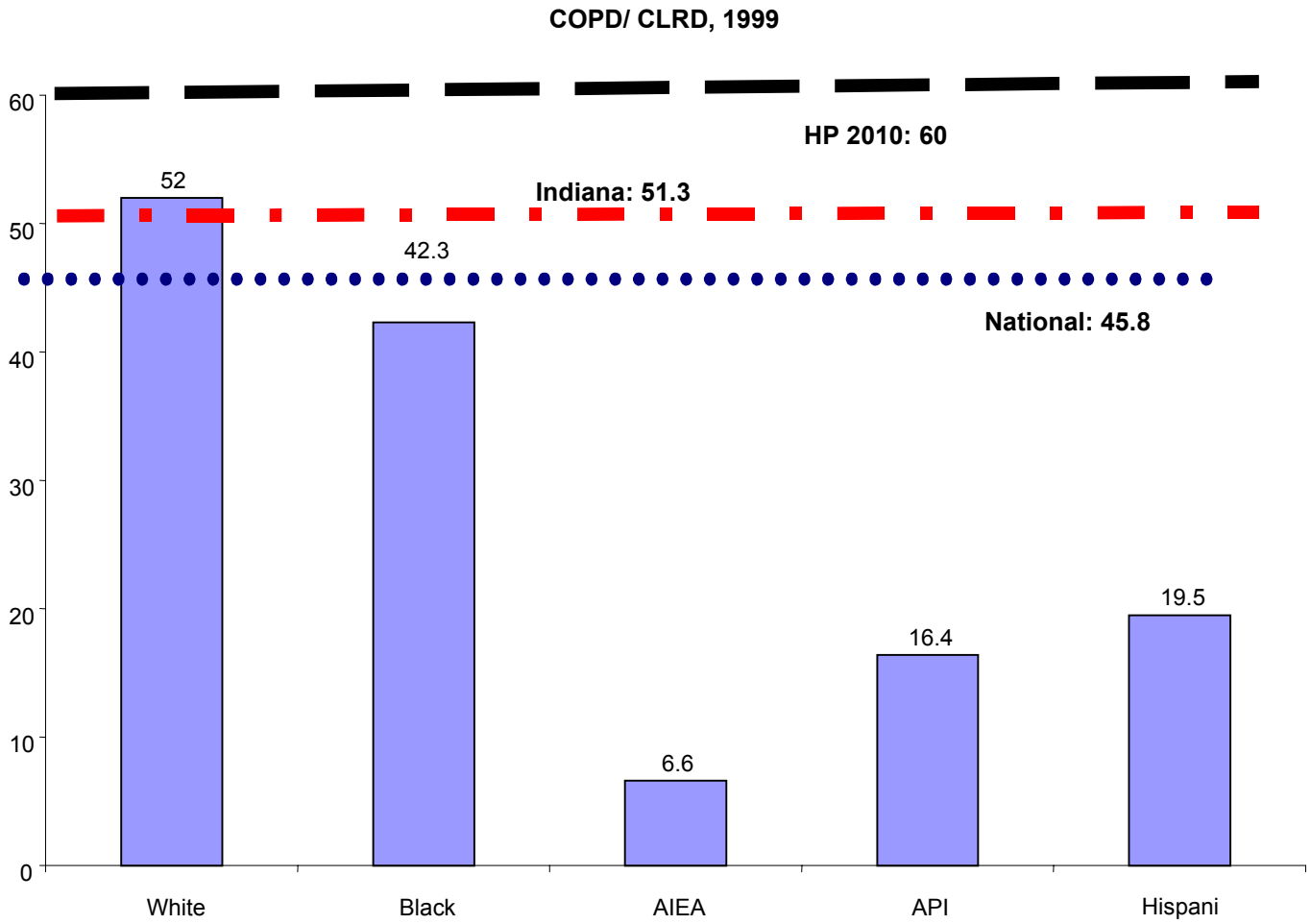

Figure3.

* Special Note- Healthy People 2010 did not have an overall total population reduction of COPD deaths, but rather focused on the population at most risk, which is older adults (45 and above). Thus the HP2010 goal above reflects this
* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound

* Hispanic is an ethnicity and it includes all races

ICD 9: E800 – E869, E880 – E929 **ICD 10: V01- X59, Y85- Y86**

UNINTENTIONAL INJURIES/ACCIDENTS OR ADVERSE EVENTS

Review

Unintentional Injury is defined as those deaths involving injury or poisoning by unpremeditated measures. The risk of injury is so great that most people suffer a significant injury at some point in time during their life. It is estimated that more persons ages 1 to 34 years die as a result of unintentional injuries than any other leading cause of death[3]. Motor vehicle crashes account for approximately half the deaths from unintentional injuries. Other unintentional injuries include falls, poisonings, suffocations, and drownings.

No single program working alone can achieve all that is needed to lower the number of unintentional injuries. Improved outcomes entail the collective efforts of many fields, including health, education, transportation, law, engineering, and safety sciences.

Data Summary

In 1999, 97,860 deaths nationally were attributed to unintentional injuries. On average in the United States, about 400 persons die from unintentional injuries each day, including 55 children and teenagers. One death out of every 17 in the United States results from injury[3]. Deaths resulting from motor vehicle accidents in 1999 were 42,401 for the nation. In 1998, Indiana had 1,032 motor vehicle accidents. The number was lower for Indiana in 1999, with only 929 motor vehicle accidents.

Age Adjusted Death Rate for Unintentional Injuries/ Accidents in Indiana (1995-1999)

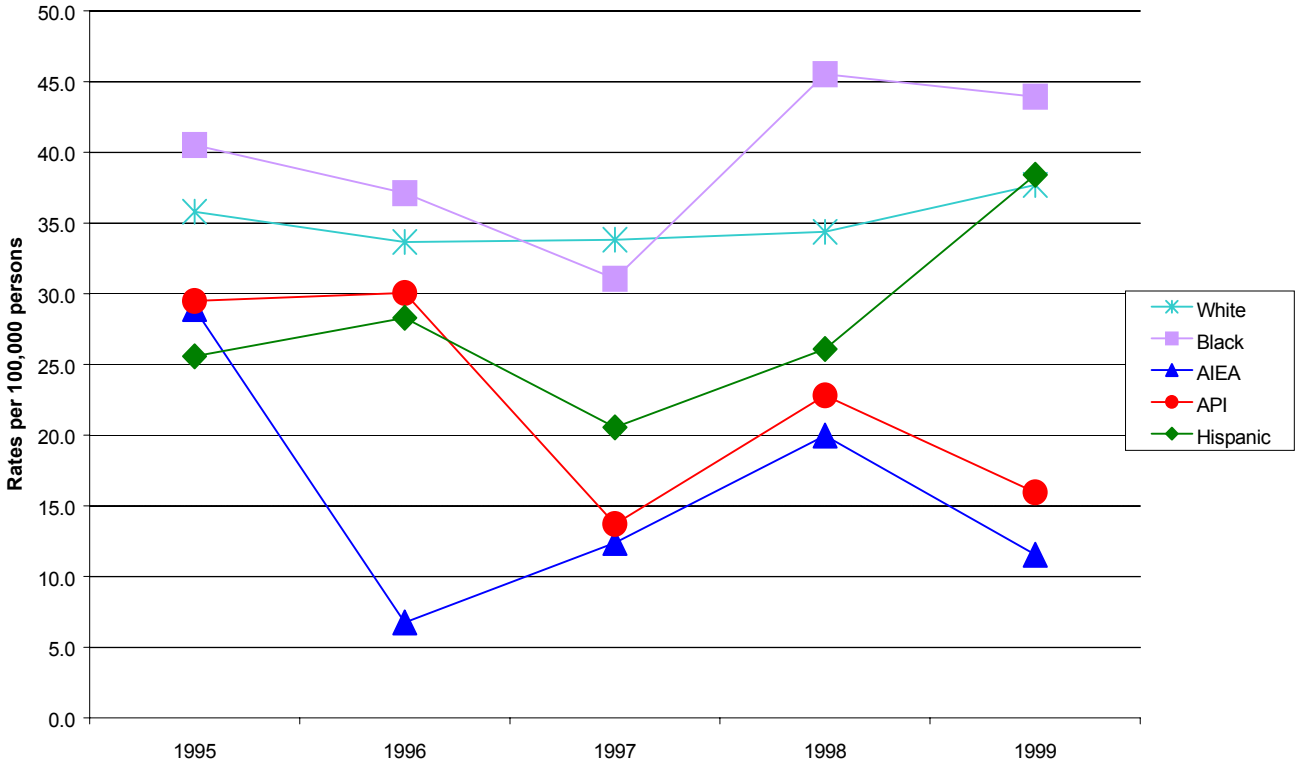

Figure 5.1

[3] *National Center for Injury Prevention and Control.*

Comparisons- Race/Ethnic Group

Examining specific national statistics on unintentional injuries in 1999, Native American Indians or Alaska Natives have the highest rate for motor vehicle crashes, 31.68 per 100,000 persons. African Americans or Blacks are second with 16.24, followed by Whites 15.61, Hispanics or Latinos at 14.98, and Asians or Pacific Islanders at 8.78 per 100,000 persons. From work-related accidents, Hispanic or Latinos have a higher incidence rate of unintentional injuries, 5.2 per 100,000 per persons[3].

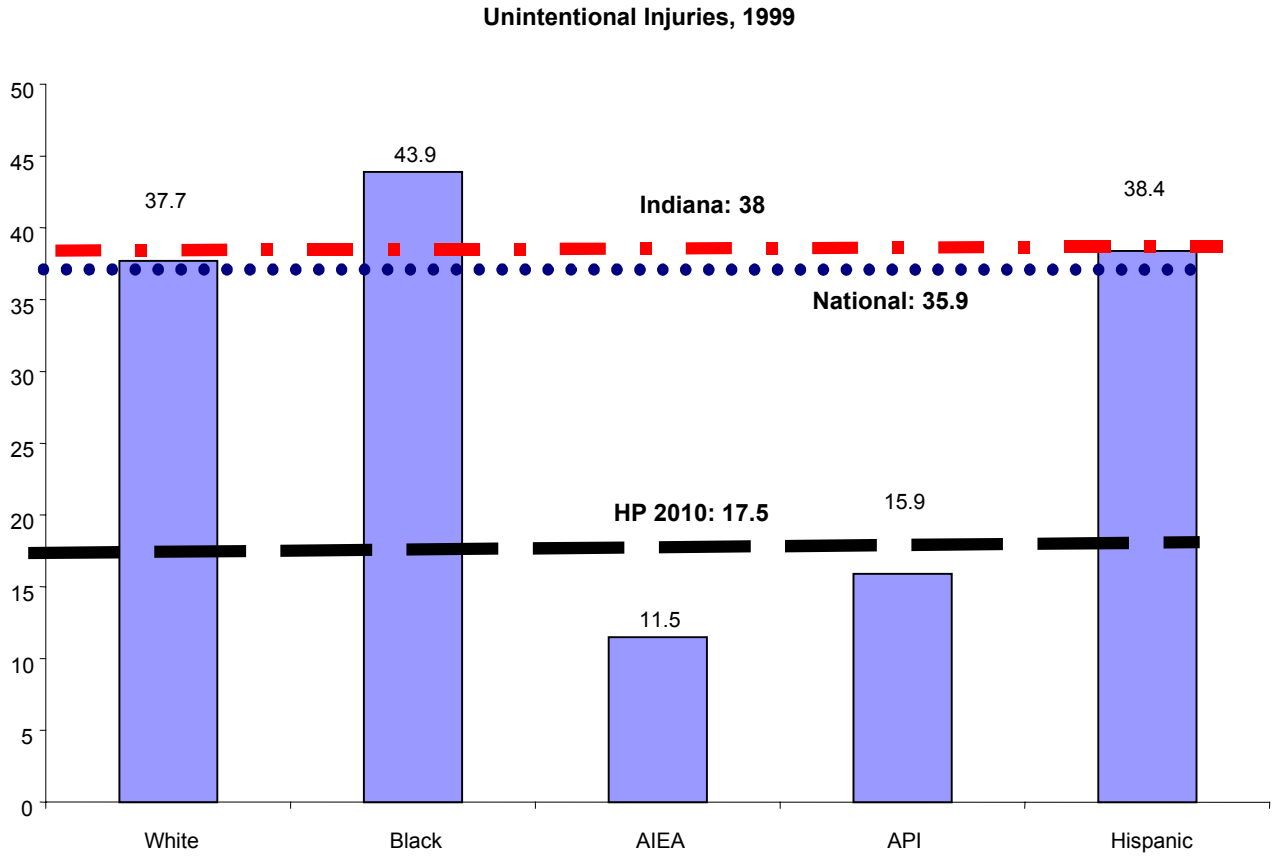

Figure 5.2

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

[3] *National Center for Injury Prevention and Control.*

ICD 9: 480-487 **ICD 10: J10- J18**

PNEUMONIA & INFLUENZA

Review

Influenza, commonly known as the flu, is a very contagious viral infection of the nose, throat, and lungs that can cause an acute respiratory disease. Flu symptoms include sudden fever, chills, headache, uneasiness, body aches, dry cough, abdominal pain, nausea, and vomiting. The peak time of influenza is between December and early March (CDC). There are two modes of transmission of influenza. One is direct person-to-person contact and the other is airborne. The average duration of influenza is 1-3 days.

Pneumococcal infections are bacterial diseases that cause pneumonia, meningitis, and sinus and ear infections. Lungs are their primary targets. There are multiple agents that can cause pneumonia. The most common agent is *Streptococcus pneumoniae.* Pneumonia significantly affects the elderly and people with serious chronic health conditions. Symptoms of pneumonia include chills, high fever, cough with mucus, chest pain, loss of consciousness, breathlessness, and increased breathing and coughing. Modes of transmission are droplet spread, oral, and aerosol. The incubation period is 1-3 days.

Data Summary

In 1996, there were a total of 95 million influenza cases reported in the United States (36 cases per 100 people)[4]. The annual number of deaths nationally reported in 1999 was 1,665. For pneumonia it was 4.8 million cases reported in 1996 (1.8 cases per 100 people). The death tolls nationally are much higher for pneumonia, 62,065 died in 1999 from pneumonia complications.

Age Adjusted Death Rate for Pneumonia and Influenza in Indiana (1995-1999)

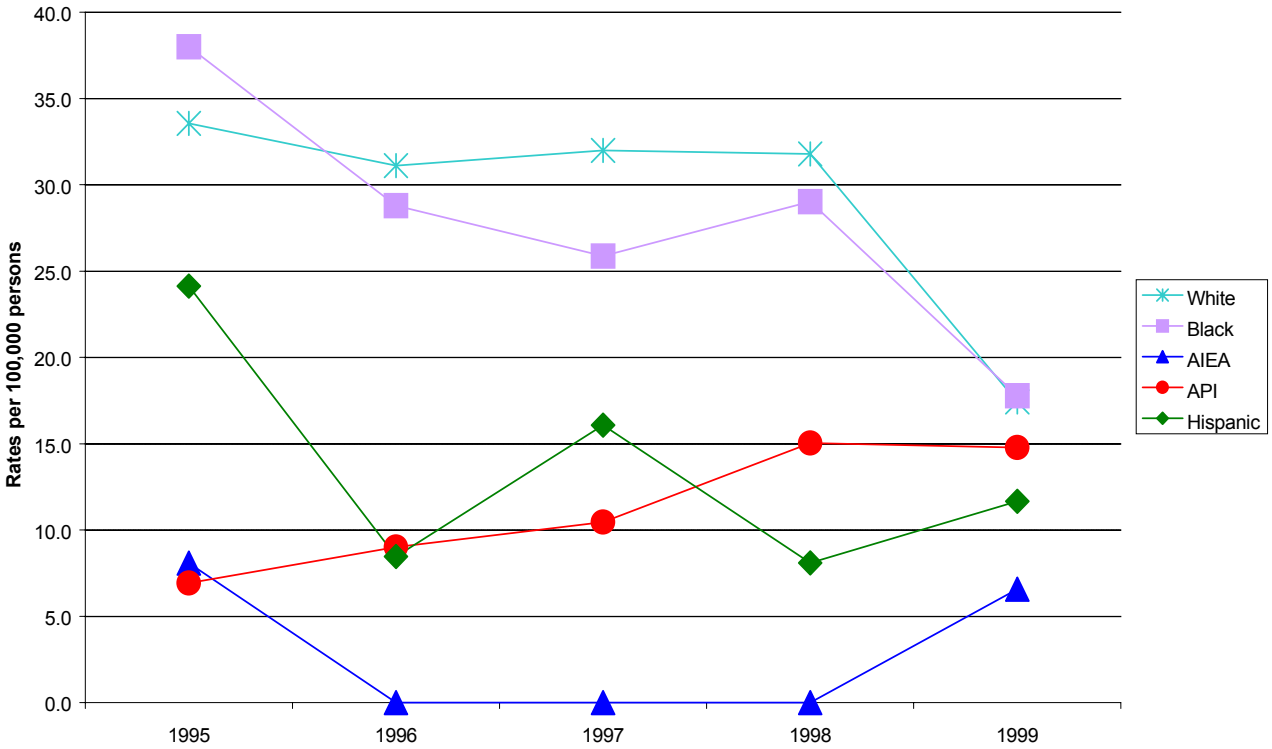

Figure 6.1

[4] *American Lung Association*

Comparisons- Race/Ethnic Group

Pneumonia and influenza was ranked as the 7th leading cause of death in the nation in 1999. Immunizations are key to lowering pneumonia and influenza death rates. Various sources show that minorities have lower immunization rates. One source is the Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS is published annually by the U.S. Centers for Disease Control and Prevention. This national survey monitors modifiable risk factors associated with chronic and communicable diseases by collecting information from adults on health behaviors and preventive practices. In 1997, the BRFSS found that Whites (47.3 percent) were "substantially more likely" to report ever receiving pneumococcal vaccine than either Hispanics (34.1%) or Blacks (29.7%).

SPECIAL NOTE:
Healthy People 2010 did not mention a goal for reducing the death rate for both pneumonia and influenza, but rather it set goals to increase the proportion of immunization rates among adults.

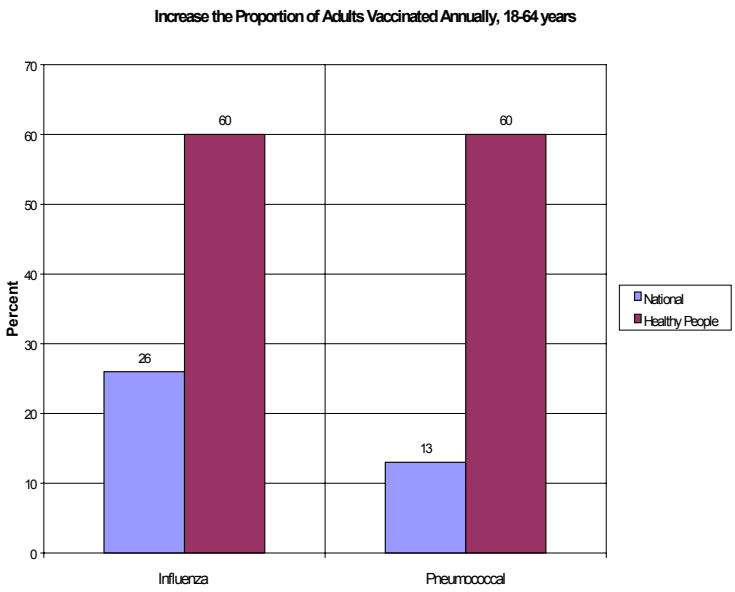

Figure 6.2

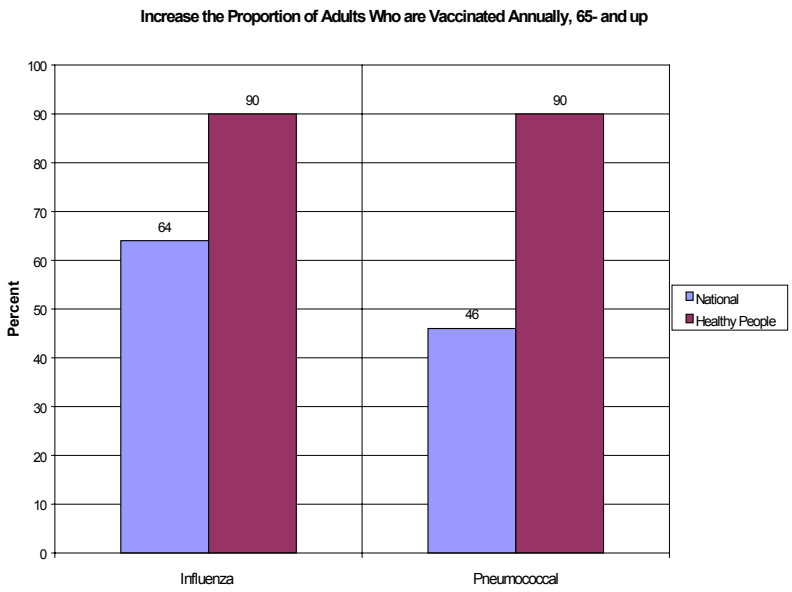

Figure 6.3

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

ICD 9: 250 **ICD 10: E10- E14**

DIABETES

Review

Diabetes Mellitus is a group of diseases characterized by high levels of blood glucose. It results from defects in insulin secretion, insulin action, or both. Even though diabetes can cause serious health complications and premature death in some cases, measures can be taken to reduce the onset of these occurrences. Some symptoms of diabetes include:

- Extreme thirst
- Frequent urination
- Unexplained weight loss
- Blurred vision
- Extreme tiredness
- Irritability
- Slow healing of wounds

Complications of diabetes include heart disease, stroke, high blood pressure, blindness, kidney disease, amputations, and dental disease.

Data Summary

In 1999 the number of deaths, in the US, from Diabetes was 68,399. There are four types of diabetes classified by the U.S. Centers for Disease Control and Prevention.

Type 1 diabetes (insulin-dependent diabetes mellitus (IDDM) or juvenile-onset diabetes) Type 1 diabetes may account for 5% to 10% of all diagnosed cases of diabetes. Risk factors are autoimmune, genetic, and environmental factors.

Type 2 diabetes (called non-insulin dependent diabetes mellitus (NIDDM) or adult-onset diabetes) Type 2 diabetes may account for about 90% to 95% of all diagnosed cases of diabetes. Risk factors for Type 2 diabetes includes older age, obesity, family history of diabetes, prior history of gestational diabetes, impaired glucose tolerance, physical inactivity, and race/ethnicity.

Gestational diabetes develops in 2% to 5% of all pregnancies but disappears when a pregnancy is over. Women who are older and obese are associated with higher risk. Women who have had gestational diabetes are at increased risk for developing Type 2 diabetes in the future. In some studies, nearly 40% of women with a history of gestational diabetes later developed diabetes.

"Other specific types" of diabetes result from specific genetic syndromes, surgery, drugs, malnutrition, infections, and other illnesses. Such types of diabetes may account for 1% to 2% of all diagnosed cases of diabetes.

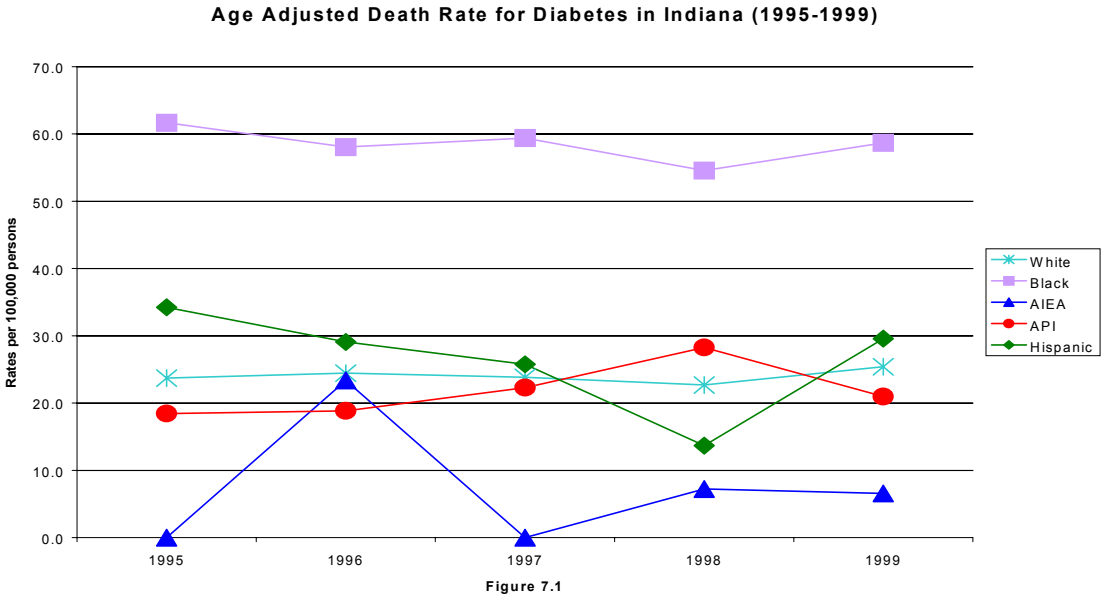

Figure 7.1

Comparisons- Race/Ethnic Group

The national Office of Minority Health reported that the prevalence of diabetes in Blacks is approximately 70 percent higher than Whites and the prevalence in Hispanics is nearly double that of Whites. The prevalence rate of diabetes among Native American Indians and Alaska Natives is more than twice that for the total population. The Pimas of Arizona have the highest known prevalence of diabetes of any population in the world. Fifty percent of Pima Indians over age 35 have type 2 diabetes[5]. African Americans, Hispanics, Native American Indians, and some Asian Americans and Pacific Islanders are at high risk for Type 2 diabetes. Gestational diabetes occurs more frequently in African Americans, Hispanic/Latino Americans, Native American Indians, and persons with a family history of diabetes.

Numbers for the different Races and Ethnicities:

Whites: 11.3 million Whites have diabetes and 7.8% of all non-Hispanic Whites have diabetes.
African Americans or Blacks: 2.3 million African Americans. Of all non-Hispanic Blacks, 10.8% have diabetes. On average, non-Hispanic Blacks are 1.7 times as likely to have diabetes as non-Hispanic Whites of similar age[5].
Hispanic/Latino Americans: On average, 1.2 million Hispanic/Latino Americans have diabetes. 10.6% of Mexican Americans have diabetes[5].
Native American Indians and Alaska Natives: 9% of Native American Indians and Alaska Natives have diagnosed diabetes. Native American Indians and Alaska Natives are 2.8 times as likely to have diagnosed diabetes as non-Hispanic Whites of similar age[5].
Asian Americans and Pacific Islanders: Prevalence data for diabetes among Asian Americans and Pacific Islanders are limited. Some groups within this population are at increased risk for diabetes. For example, data collected from 1988 to 1995 suggest that Native Hawaiians are twice as likely to have diagnosed diabetes as White residents of Hawaii are[5].

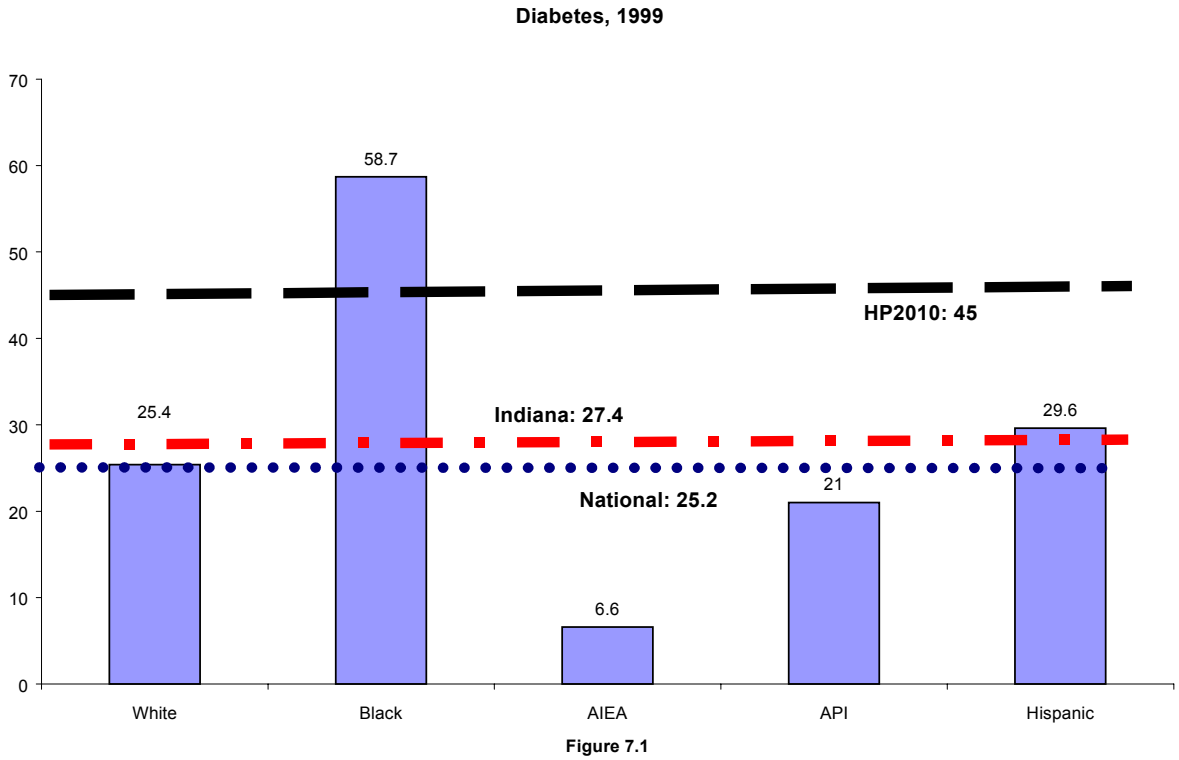

Figure 7.1

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[5]*National Institute of Diabetes & Digestive & Kidney Disease*

ICD 9: E950-E959 **ICD 10: X60- X84.9, Y87.0**

SUICIDE

Review

In the United States, there is one suicide every 18 minutes[6]. In 1998, suicide was ranked 8th, in the nation, as a leading cause of death. Although in 1999 it dropped to 11th, among those ages of 15-24 it was listed as the third leading cause of death.

Warning Signs

- Verbal threats such as "You'd be better off without me" or "Maybe I won't be around anymore..."
- Expressions of hopelessness and/or helplessness
- Previous suicide attempts
- Daring and risk-taking behavior
- Personality changes (i.e. withdrawal, aggression, and moodiness)
- Depression
- Giving away prized possessions
- Lack of interest in the future

If you suspect someone you know has any of the symptoms listed above, please contact your local Mental Health Association, the American Association of Suicidology, or a local Crisis and Suicide organization or hotline.

Data Summary

In 1999, suicide caused 29,199 deaths in the United States. The age-adjusted death rate was 10.7 per 100,000 population. Looking at gender, men have a higher number of suicides than women[6]. (23,458 men compared to 5,741 women). There are higher rates of suicide among two specific age groups: the elderly (65 + yrs) and youth (15- 24). According to national figures firearms ranked 1st in the method of suicide, followed by hanging, strangulation, and suffocation[6].

Age Adjusted Death Rate for Suicide in Indiana (1995-1999)

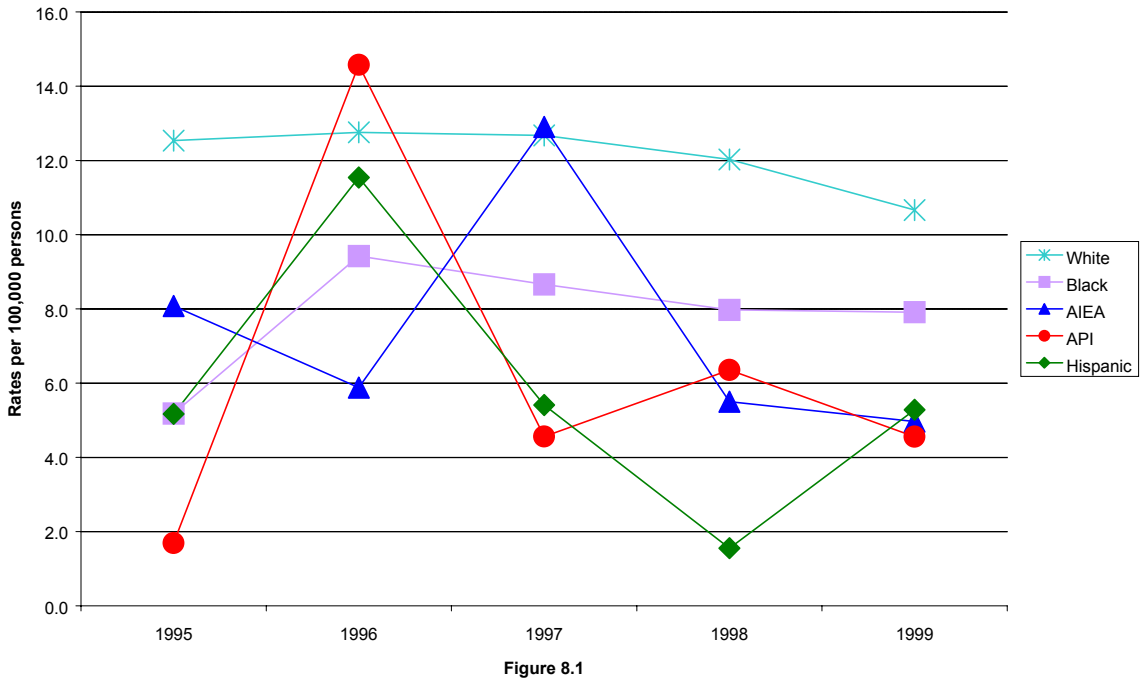

Figure 8.1

[6] *American Association of Suicidology; Data Sources provided by NCHS*

Comparisons- Race/Ethnic Group

When looking at race in Indiana, Whites are ranked the highest for suicide. According to an analysis of 1979-1992 National Center for Health Statistics mortality data, suicide rates for Native American Indians were 1.5 times that of the national average. Nationally in 1999, Native American Indians had the highest rate of suicide. (12.1 per 100,000) followed by Whites (11.7 per 100,000).

The following graph compares the difference in rates for Indiana minorities with that of the nation.

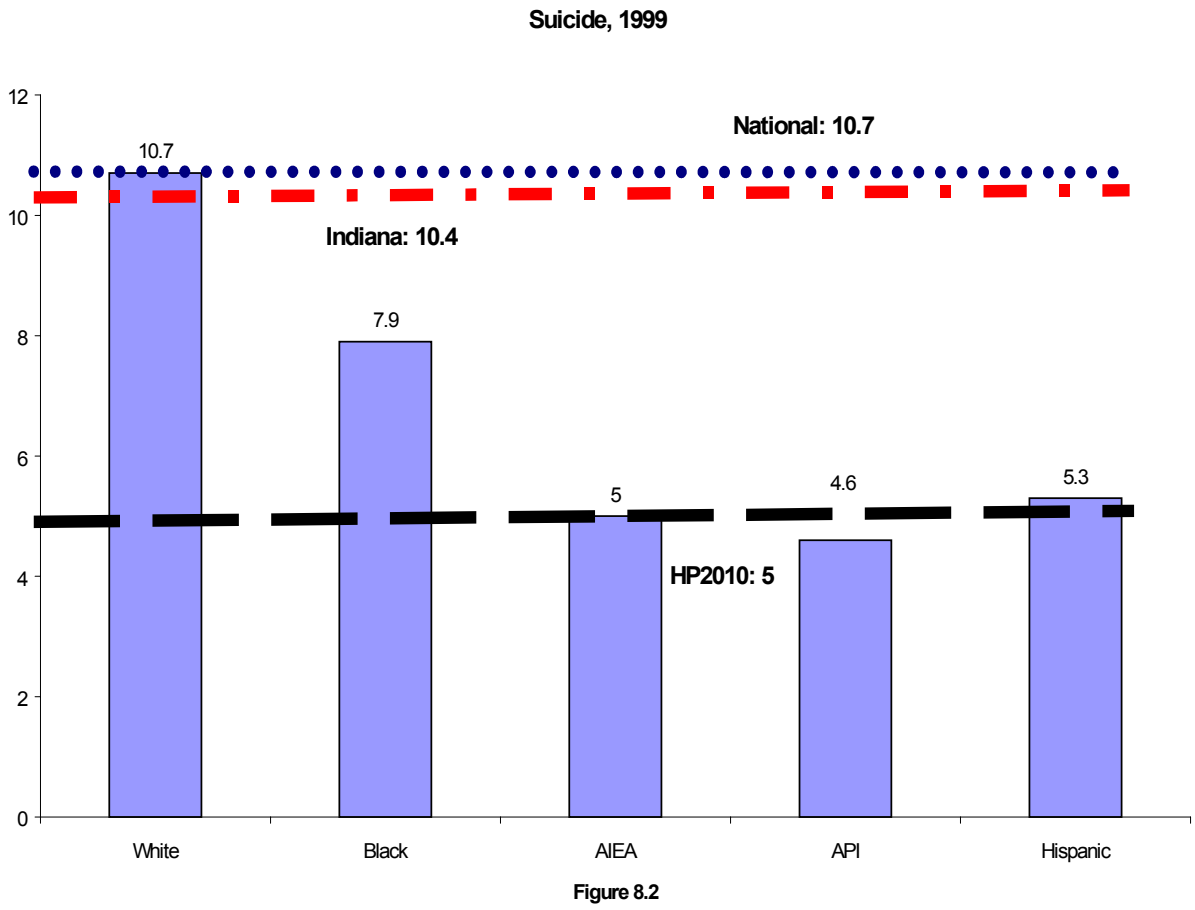

Figure 8.2

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ICD 9: 580-589 **ICD 10: N00- N07, N17- N19, N25- N27**

KIDNEY DISEASE/END STAGE RENAL DISEASE (ESRD)

Review

Kidneys perform several functions. They remove waste from the body through urine, filter toxins in the blood, and help regulate blood pressure. Kidneys maintain a balance of minerals, including potassium and calcium. Anyone can develop kidney disease, but the two leading causes of End Stage Renal Disease (ESRD) are diabetes and high blood pressure.

Knowing the warning signs is very important. They include the following:

- High blood pressure
- Swelling in the face and ankles
- Puffiness around the eyes
- Frequent urination (mostly at night)
- Rusty or brown colored urine
- Back pain just below the rib cage

Several treatments exist for kidney disease. Dialysis is a life-saving procedure that replaces the normal function of kidneys. Kidney transplants benefit ESRD patients greatly as well. There are steps that can be taken to prevent kidney disease. Drinking plenty of fluids, exercising regularly, not smoking, maintaining a healthy weight, and regular screenings for diabetes and hypertension.

Data Summary

Of the 3.5 million Americans who reported kidney trouble in 1996, females suffered more from kidney and bladder disorders than men did. Each year, kidney disease causes 36,000 deaths[7]. The estimated amount spent nationally in 1998, both publicly and privately, for treatment of kidney disease was $16.74 billion dollars.

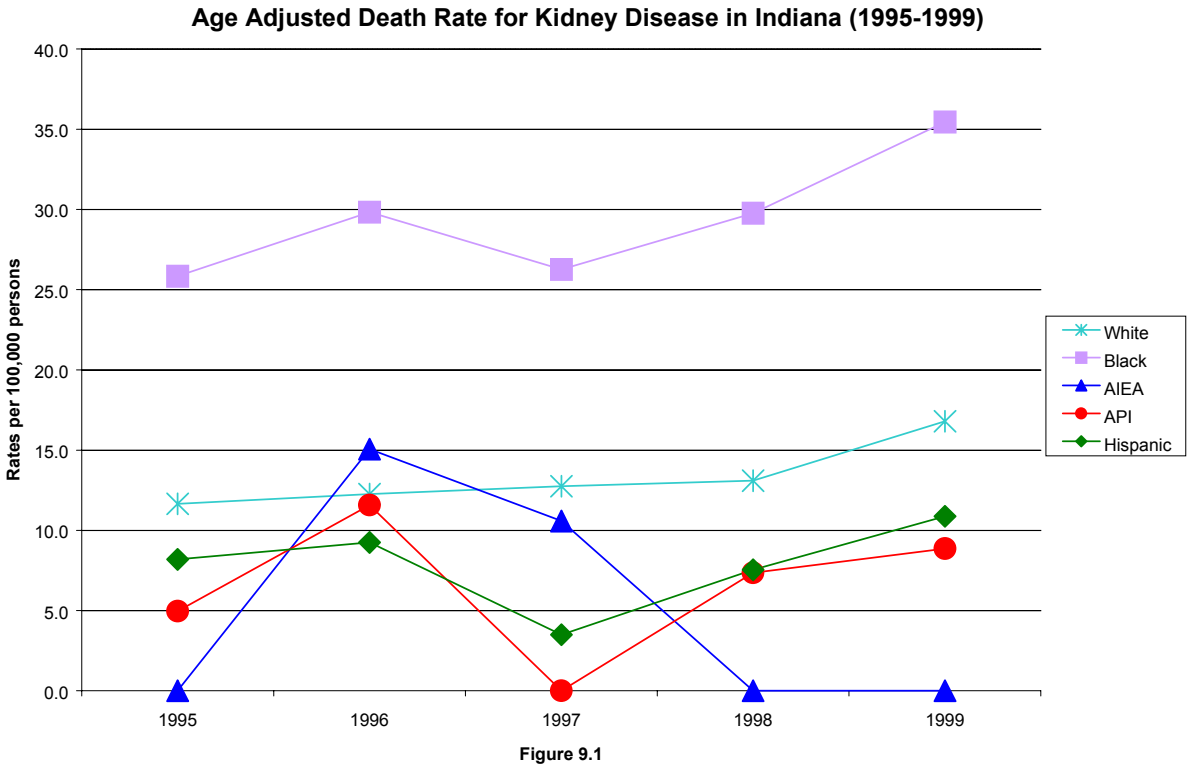

Figure 9.1

[7]*Source: National Vital Statistics Report Vol.49, No. 8*

Comparisons- Race/Ethnic Group

Kidney disease has a disproportionate impact on populations of color, especially African Americans and Native American Indians. In 1999, the rates per million population for new cases of kidney disease (ESRD) for different population groups were: 953 for African Americans; 652 for Native American Indians; and 386 for Asian Americans compared with 237 for Whites. African Americans constitute about 32.4 percent of all patients treated for kidney failure in the U.S., but make up only 12 percent of the U.S. population. In the case of Native American Indians, the high incidence of diabetes is the underlying cause of developing kidney failure 3 more times than Whites[8].

Special Note

Healthy People 2010 did not have a specific goal for reducing kidney disease/ESRD death rate, but instead had a rate for reducing the number of new cases of ESRD. The target rate is 217 new cases per one million population. The 1999 age-adjusted rate in Indiana for kidney disease is 17.9 per 100,000 persons.

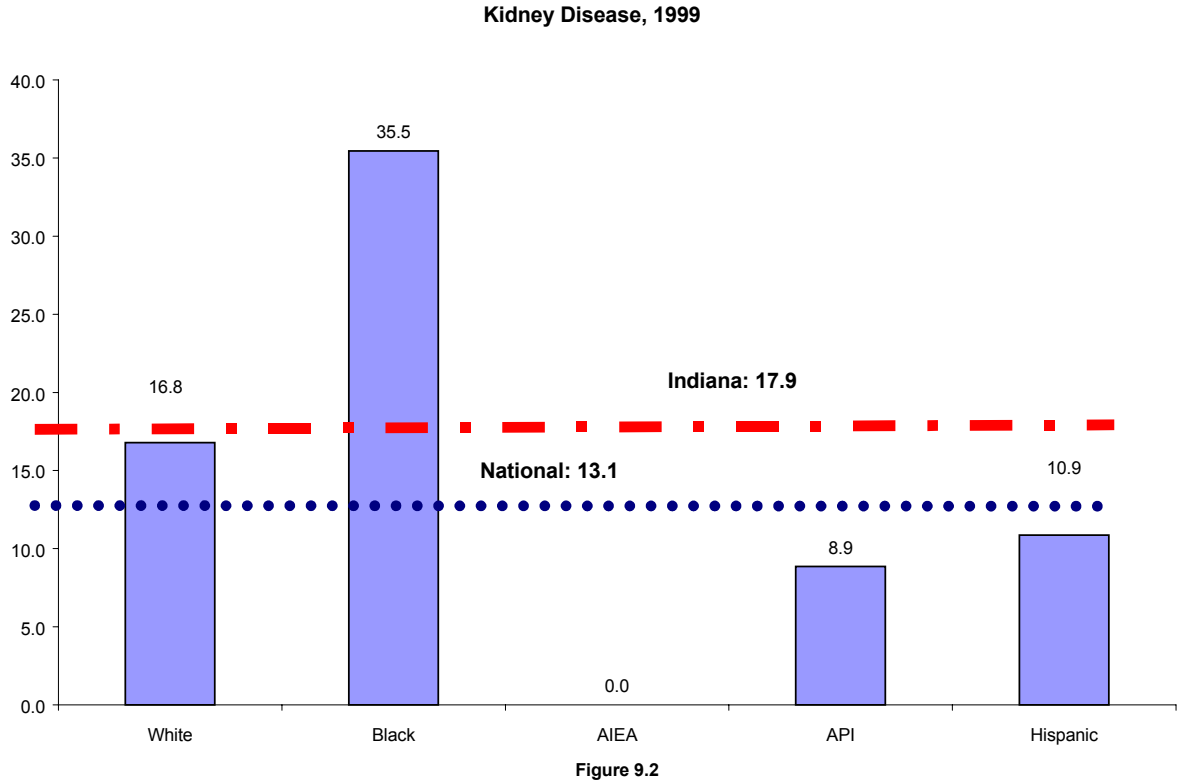

Figure 9.2

* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

[8] *National Kidney Foundation*

ICD 9: 571 **ICD 10: K70, K73- K74**

CIRRHOSIS

Review

The liver is an important organ that keeps the body functioning correctly. It determines whether incoming substances are useful to the body or whether they are waste. Functions include removing and defusing poisons from the blood (detoxification). The liver also synthesizes triglycerides and cholesterol, breaks down fatty acids, and produces plasma proteins necessary for blood clotting. The disease cirrhosis has many causes but alcoholism and hepatitis C are the most common. Cirrhosis occurs when scar tissue replaces healthy tissue in the liver. The increase of scar tissue blocks the normal flow of blood through the liver, preventing the liver from working productively.

Some symptoms of cirrhosis include:

- Exhaustion
- Fatigue
- Loss of appetite
- Nausea
- Weakness
- Weight loss
- Impotence
- Enlarged breasts in men

Liver damage cannot be reversed, but there are treatments that can delay or stop further spread of the disease. Type of treatment depends upon the cause.

Data Summary

In 1999, 26,259 deaths occurred, in the U.S., due to cirrhosis. Males have a higher age-adjusted rate (13.7 per 100,000 population) than females (6.1 per 100,000 population).

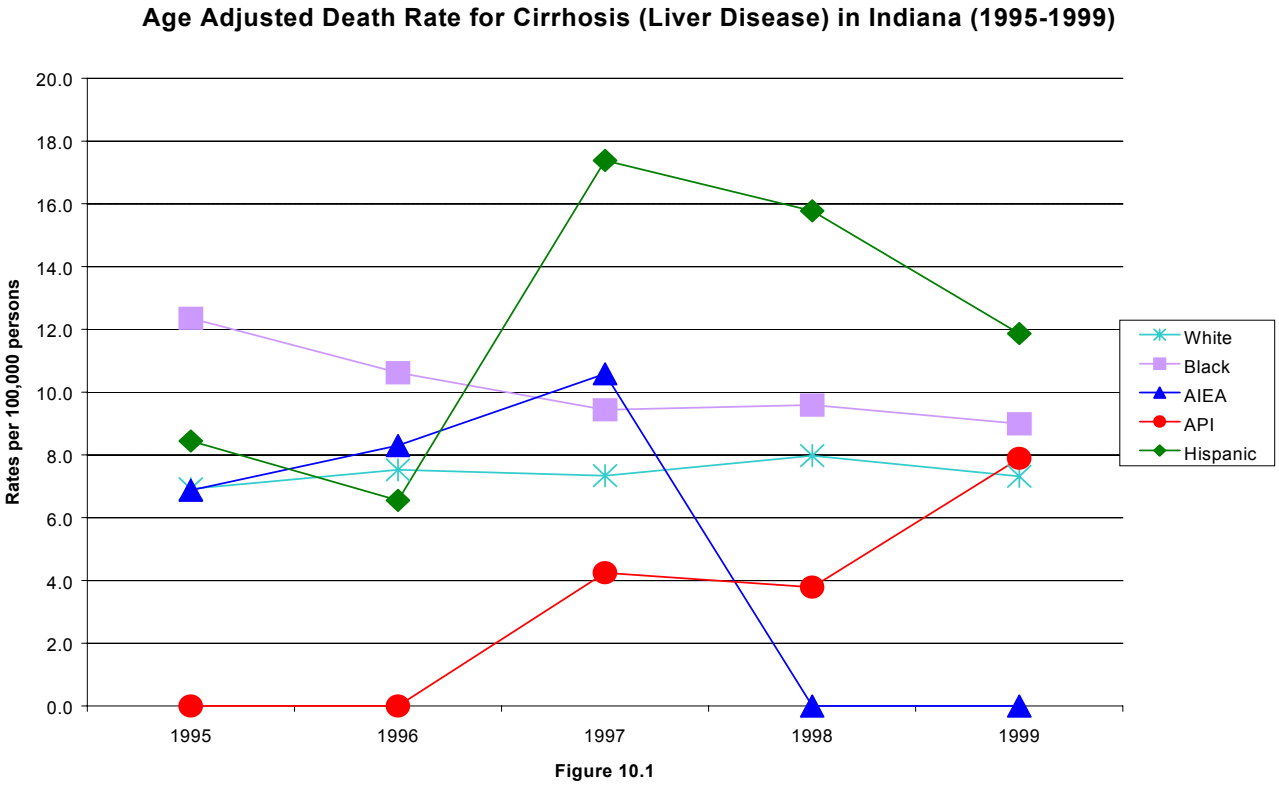

Figure 10.1

Comparisons- Race/Ethnic Group

In 1999, the Native American Indians or Alaska Natives had the highest mortality rate of cirrhosis (21.4 per 100,000 population (NCHS). However due to the low population of Native American Indians and Alaska Natives in Indiana, reported mortality cases of cirrhosis are very low. In the graph below, there were no reported deaths from cirrhosis for Native American Indians or Alaska Natives in 1999.

Alcohol abuse and alcoholism have forged problems for Native American Indians and Alaska Natives. Alcohol related diagnosis among Native American Indian men are double that among Native American Indian women. It was also discovered that Fetal Alcohol Syndrome is at a higher rate for Native American Indians than other minority groups, specifically among the Navajo and Pueblo tribes[9].

Heavy drinking (5 drinks or more in a day) is most prevalent among Native American Indians/Alaska Natives and Native Hawaiians and lowest among Asian Americans/Pacific Islanders. Deaths from chronic liver disease and cirrhosis are about 4 times more prevalent among Native American Indians than among the general U.S. population. However Hispanic/Latinos are approximately twice as likely as Whites to die from cirrhosis, despite a lower prevalence of drinking and heavy drinking. Evidence exists that Hispanics tend to consume alcohol in higher quantities per drinking occasion than do Whites, resulting in a higher cumulative dose of alcohol[10].

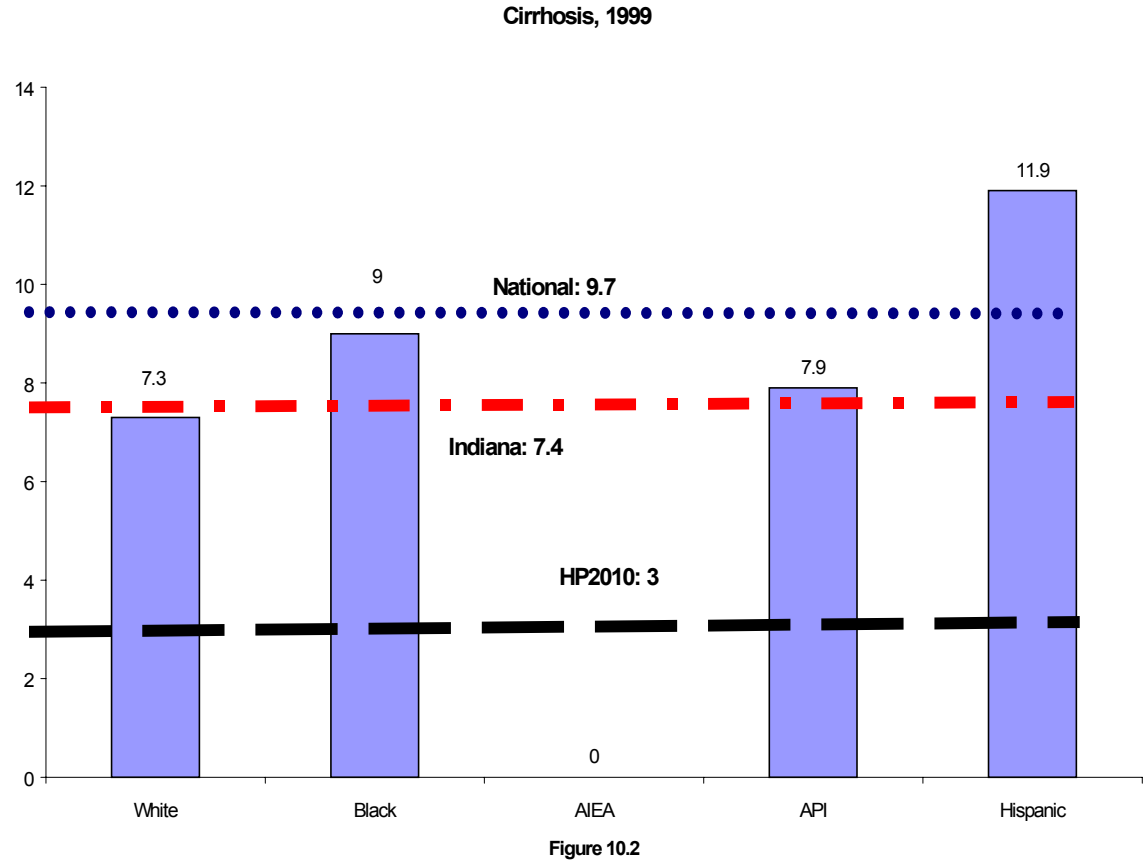

Figure 10.2

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[9] *Alcohol Health & Research World Vol.22, No.4, 1998*
[10] *National Institute on Alcohol Abuse and Alcoholism No. 55 January 2002*

ICD 9: E960-E969 **ICD 10: X85- Y09**

HOMICIDE

Review

On an average day in the United States, 53 persons die from homicide[11]. Despite a decline in homicide numbers and rates, the homicide rates for teenagers and young adults (ages 15 to 24) remain high and are the second leading cause of death of these age groups (NCHS). Public health professionals must determine what and why certain social and environmental factors place people at risk for violent crimes endangering health. These factors include poverty, discrimination, lack of increased education, and lack of employment opportunities.

In relation to victims, studies show that elderly persons, females, and children continue to be the main targets of both physical and sexual assaults, which are frequently carried out by individuals they know[11].

Data Summary

According to the United States Department of Justice, from 1976 to 1999, 76.3% of homicide victims were males, and 23.7% were women. During that same period, males committed 87.7% of homicides and women committed 12.3% of homicides. Males are three times more likely to be killed and eight times more likely to kill than females are. Most homicide offenders are between the ages of 14-24. In 1999, 16,889 died in the United States from homicides.

Age Adjusted Death Rate for Homicide in Indiana (1995-1999)

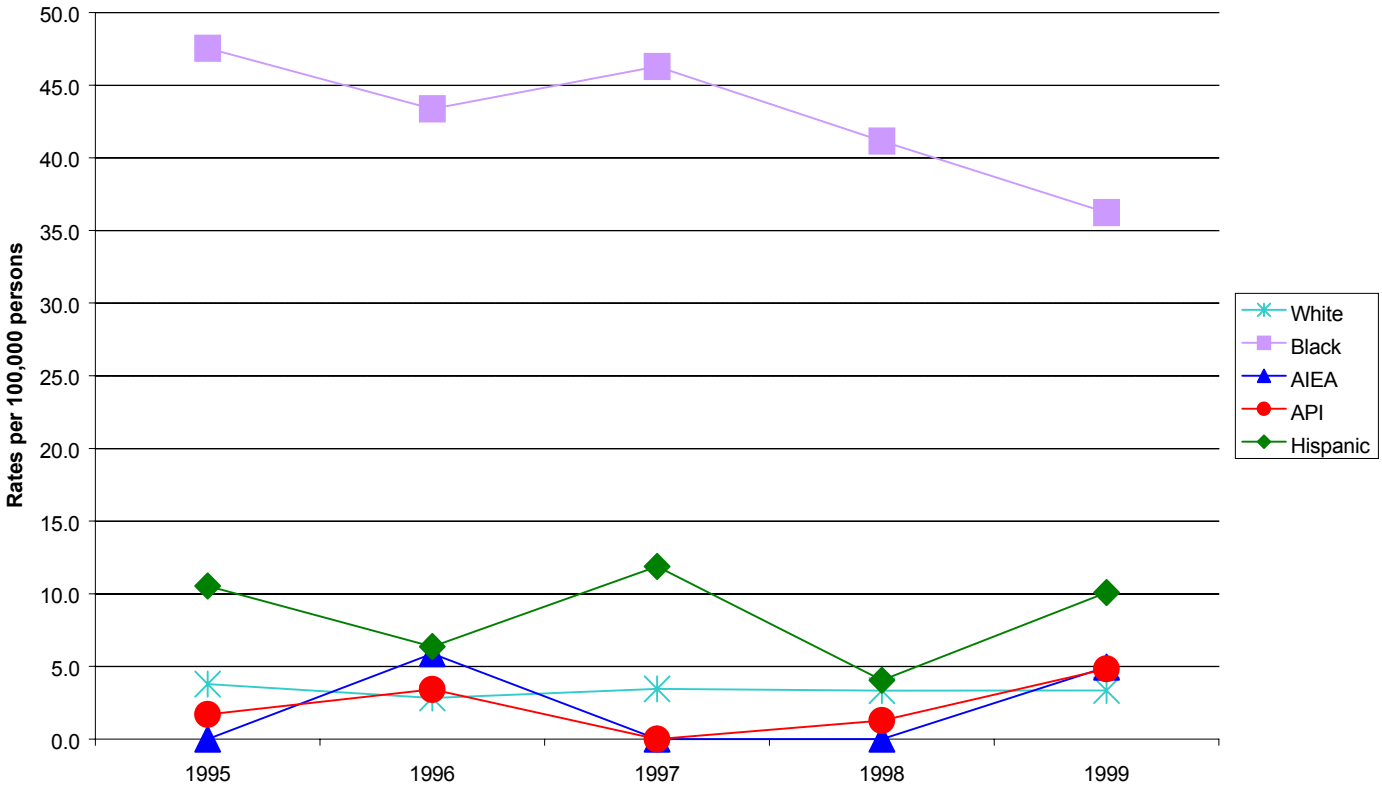

Figure 11.1

[11] *U.S. Department of Justice; Bureau of Justice Statistics.*

Comparisons- Race/Ethnic Group

In the U.S., African American and Hispanic youth are victims of homicide at much higher rates than Whites. In 1999, African Americans aged 20 to 24 years had a homicide rate (61.2 per 100,000) that were more than twice the rate of their Hispanic counterparts (23.7 per 100,000) and nearly 8 times the rate of their White counterparts (8.2 per 100,000). In the Native American Indian/ Alaskan Native community, it is estimated that 75% of female Native American Indian and Alaskan Native homicide victims are killed by someone they know. Intimate Partner violence is on the rise within this population[12].

In Indiana, African Americans surpassed other racial and ethnic groups with their homicide death rates. Also, comparing the 1999 homicide death rate nationally to that of Indiana's African American population, our state is double the national rate. (21.9 per 100,000/ 36.6 per 100,000)

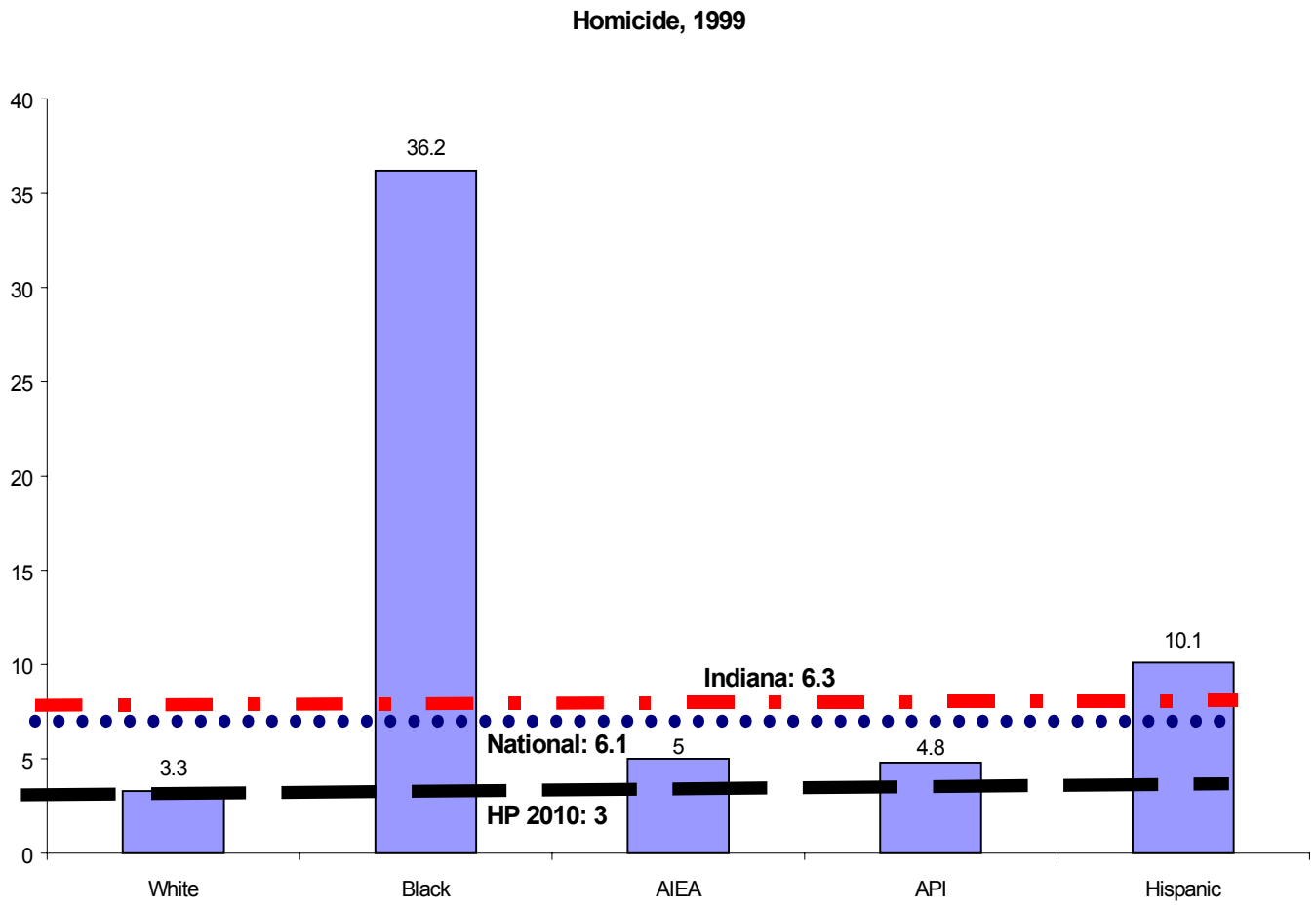

Figure 11.2

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[12] *National Center for Injury Prevention & Control Home Page*

ICD 9: 042-044 **ICD 10: B20- B24**

HIV/AIDS

Review

The first reports of HIV/AIDS in the United States were in 1981. AIDS (Acquired Immunodeficiency Syndrome) is caused by the Human Immunodeficiency Virus (HIV). This virus kills and destroys cells of the body's immune system. HIV disrupts the body's process of fighting off disease-causing bacteria, viruses, parasites and fungi, making one more susceptible to infections that you would normally resist. HIV/AIDS can be transmitted in several ways:

- Sexual intercourse
- Shared needles or syringes
- Through contaminated blood
- Untreated pregnant women with HIV/AIDS can pass it to their infants during delivery and even through breast milk

Education helps people to combat HIV/AIDS. Knowing more about the disease can make you better prepared to inform others or know what signs and symptoms to look for. Things that will help prevent the spread of HIV/AIDS:

- Know your partner's sexual history
- Use protection. (Abstinence is the only100% safe sex method)
- Do not share needles
- If you are sexually active with more than one person, get regular screenings

Data Summary

More than 700,000 cases of AIDS has been reported in the United States since 1981 and as many as 900,000 Americans may be infected with HIV[13]. In 1999, HIV/AIDS caused 14,802 deaths in the U.S. Males have a higher rate of HIV/AIDS than women do. (8.4 per 100,000 persons versus 2.6 per 100,000 persons.)

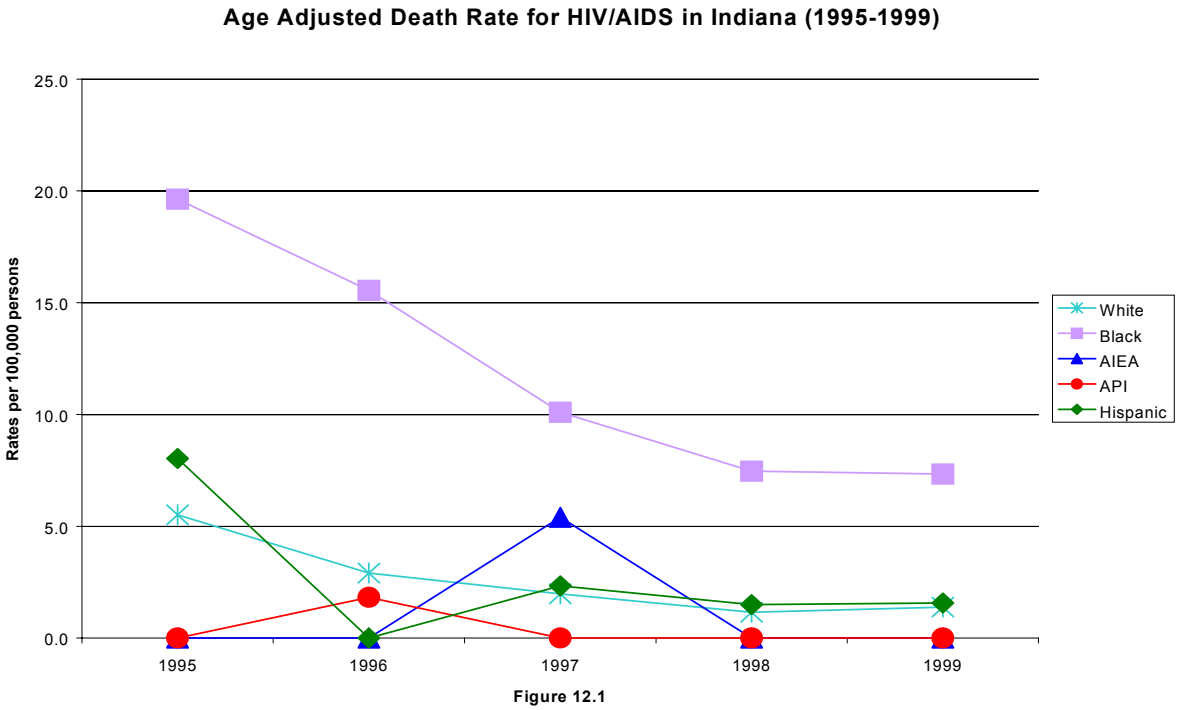
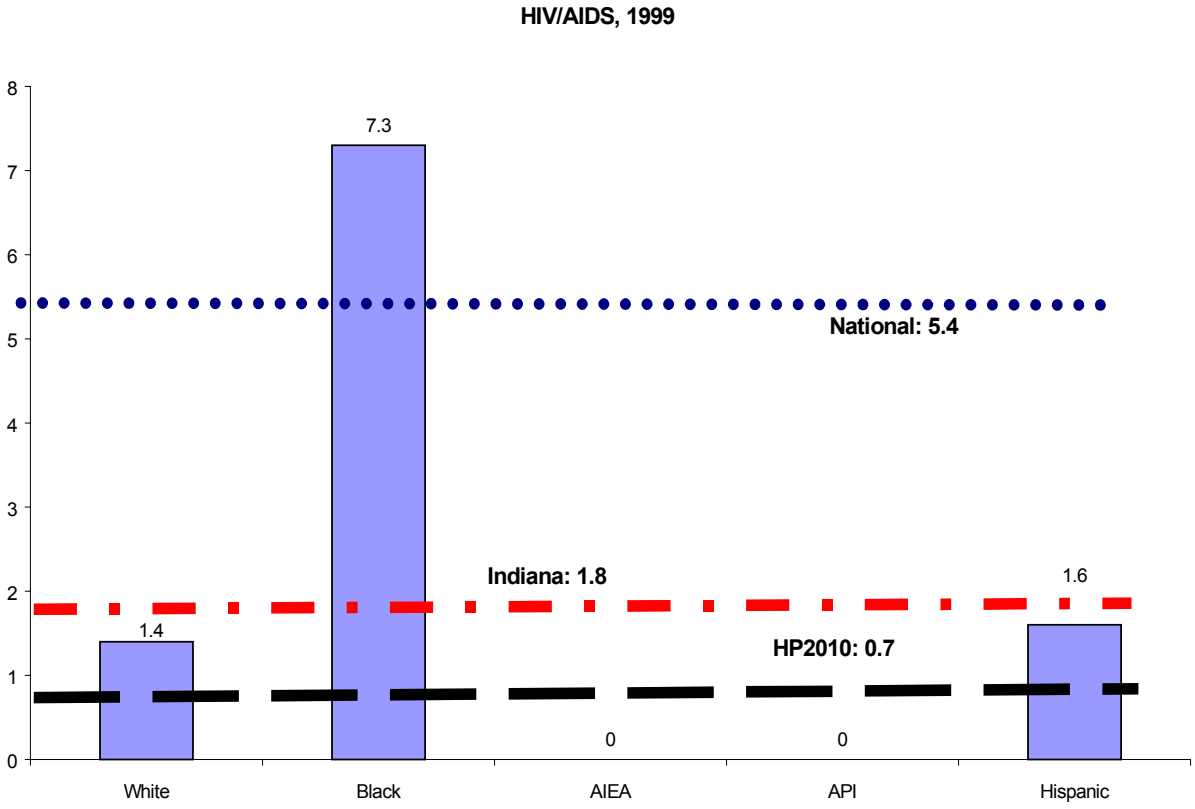


Figure 12.1

[14]*National Institute of Allergy and Infectious Disease; National Institute of Health*

Comparisons- Race/Ethnic Group

The impact of HIV/AIDS within the minority communities has been devastating, especially among African American males. It is estimated that 1 in 50 Black men and 1 in 160 Black women are infected with HIV[13]. African Americans accounted for 21,900 of the 46,400 total AIDS cases reported in the U.S. during 1999. The Hispanic population is growing and so are the numbers of reported HIV/AIDS cases[13]. Hispanics accounted for 18% of AIDS cases reported in 1999. That is 9,021 to be exact. After these two groups followed Native American Indians or Alaska Natives then Asian or Pacific Islanders. It is important to note that even though the Asian community has smaller numbers, Asian women have a higher number of reported AIDS cases then Asian men.



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ICD 9: 760-779 **ICD 10: P00- P96**

CONDITIONS THAT ORGINATE IN THE PERINATAL PERIOD

Review

On an average week in Indiana, 1,605 babies are born. Of those 1,605 babies; 223 are born to teen mothers, 61 are born to mothers who received late or no prenatal care, 123 are born low birthweight (<5.5 lbs.), 21 are born at a very low birth weight (<3.3 lbs.) and 13 die before their first birthday (March of Dimes).

The perinatal period is the time from 28 weeks gestation to one week after birth. The following are life-threatening health conditions that take place during the perinatal period:

- Fetus and newborn affected by maternal factors and by complications of pregnancy, labor, and delivery
- Disorders related to length of gestation and fetal growth
- Birth trauma
- Respiratory and cardiovascular disorders specific to the perinatal period
- Infections specific to the perinatal period
- Hemorrhagic and hematological disorders of fetus and newborn
- Transitory endocrine and metabolic disorders specific to fetus and newborn
- Digestive system disorders of fetus and newborn
- Conditions involving the integument and temperature regulation of fetus and newborn
- Other diseases originating in the perinatal period

Special Note:

Because infant mortality is also high among minorities, this report will look at infant deaths, neonatal deaths, and postneonatal deaths.

Neonatal mortality is defined as those deaths that occur within the first 28 days of life. The top four leading causes of neonatal mortalities are: congenital anomalies, disorders related to short gestation and low birth weight, respiratory distress, and maternal complications of pregnancy.

Postneonatal mortality is defined as those deaths that occur after the first 28 days of life, but before the child reaches age one. The top four leading causes of postneonatal deaths are: sudden infant death syndrome (SIDS), congenital anomalies, injuries, pneumonia and influenza, and homicide.

Infant mortality is defined as those deaths that occur within the first year of life. The leading causes of infant death are: congenital anomalies, pre-term/low birthweight, SIDS, respiratory distress syndrome, complications of pregnancy, complications of placenta cord and membrane, accidents, perinatal infections, pneumonia and influenza, and intrauterine hypoxia and birth asphyxia.

Data Summary

In 1999 there were 18,728 neonatal deaths in the United States. The neonatal death rate in 1999 was 4.7 per 1,000 live births. For postneonatal deaths there were 9,209 and the postneonatal death rate was 2.3 per 1,000 live births. The 1999 infant mortality rate (IMR) for the U.S. was 7.0 per 1,000 live births. Although rates have improved since 1911 (when IMR was on average 100 per 1,000 live births), we still have a long way to go. The United States is ranked 26th among the world when looking at IMR. Indiana is ranked 15th out of 51 states and territories.

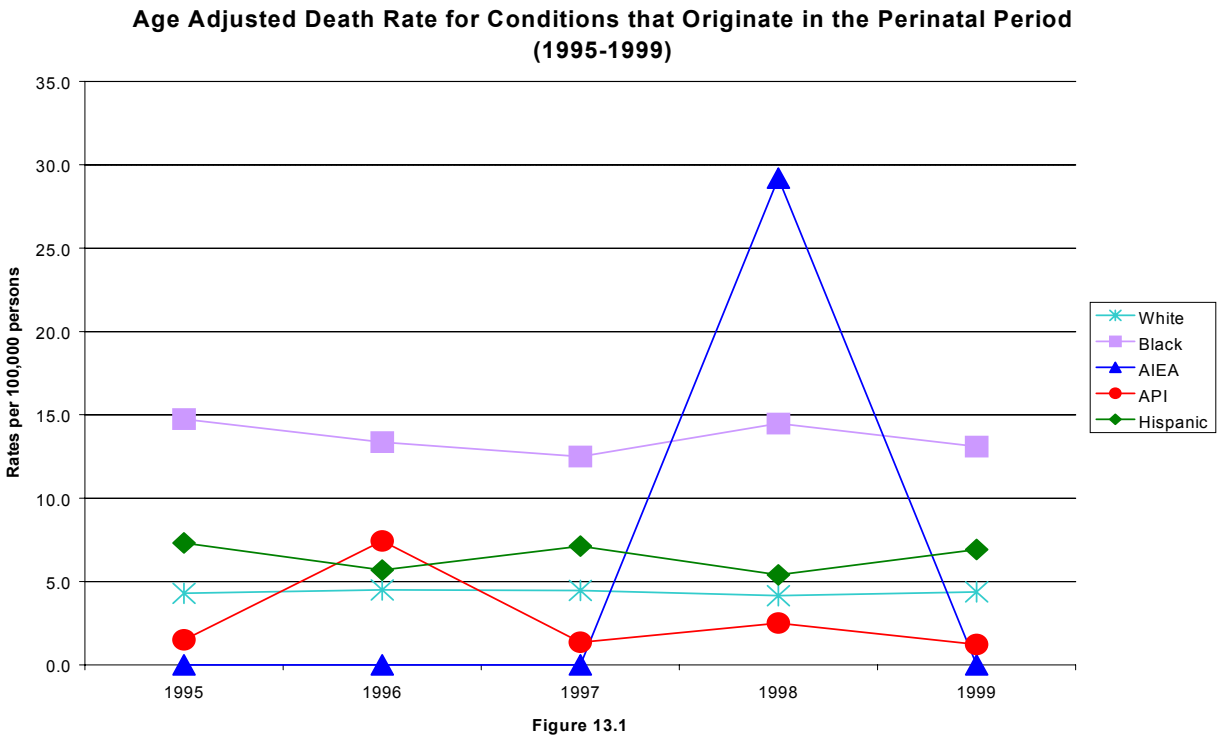

Figure 13.1

Comparisons- Race/Ethnic Group

African Americans have the highest infant mortality rate. The national average is 7.1 per 1,000 live births. The African American IMR is 14.6 per 1,000 per live births (NCHS). This rate for Indiana is 17.0 per 1,000 live births. In neonatal deaths, African Americans are ranked the highest, 9.8 per 1,000 live births. There is a change when we look at the national rate for postneonatal deaths. African Americans and Native American Indians are virtually the same (African Americans- 4.8 per 1,000 live births and Native American Indians- 3.8 per 1,000 live births)(NCHS). There are many reasons for these substantial differences among these rates and different races. Factors that could include the adequacy of prenatal care and/or lack of prenatal care during the first trimester. Public health professionals must determine why minorities are at an increased risk for pre-term, low birth-weight, and other complications of pregnancy.

SPECIAL NOTE:

The Healthy People 2010 definition of perinatal period differs from Indiana definition. Instead of seeing it broken down by race, it is broken down by rate of infant deaths (IMR), neonatal deaths (NMR), and post-neonatal deaths (PMR).

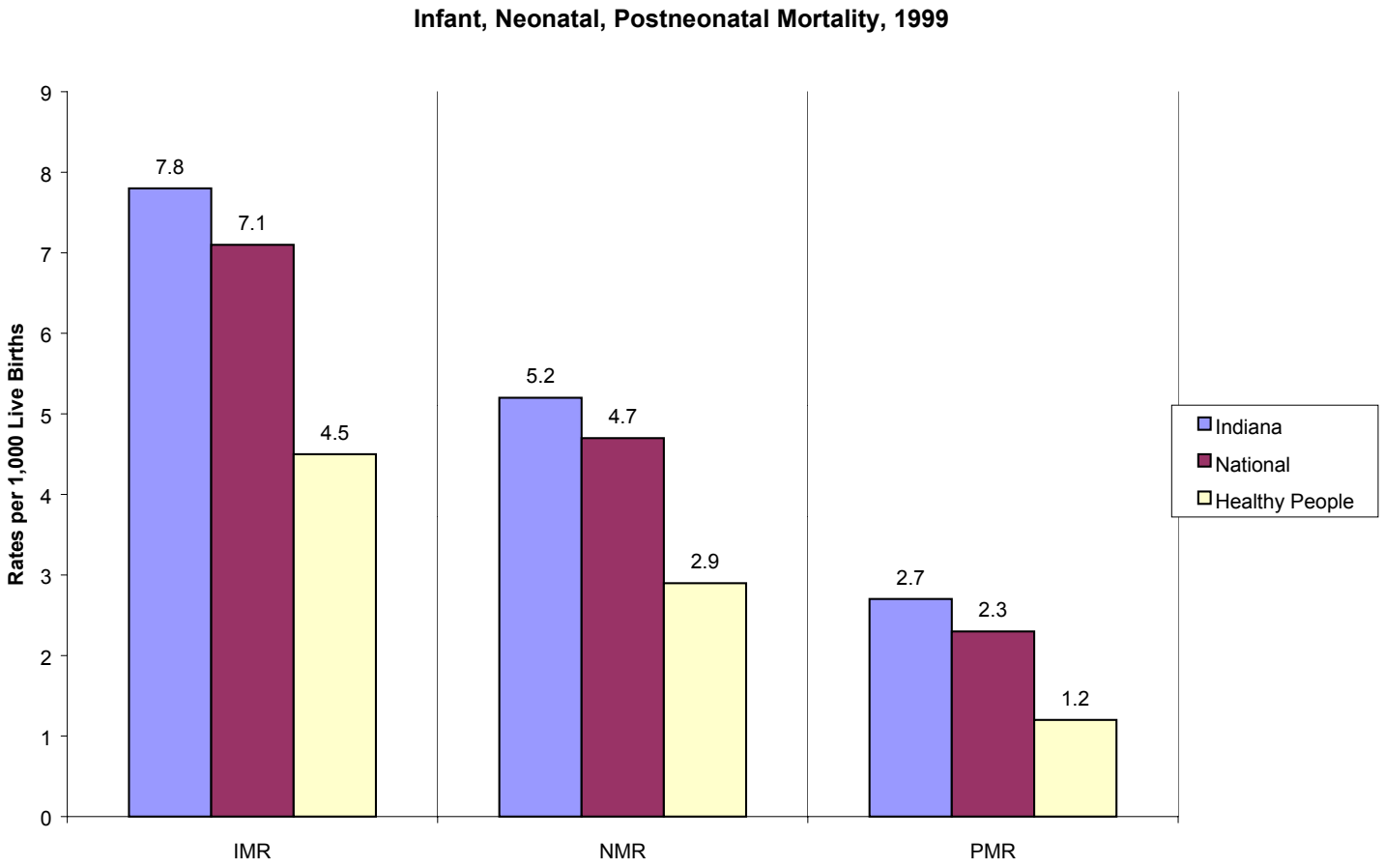

Figure 13.2

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population.
* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

ICD 9: 290.1,331.0 **ICD 10: G30**

Alzheimer's

Review

Dementia is a brain disorder that seriously affects a person's ability to carry out daily living tasks. Alzheimer's disease (AD) is the most common form of dementia among older people. It involves the parts of the brain that control thought, memory, and language. AD is a disease, which causes changes in the brain. It is a slowly progressing disease, which begins with mild memory problems and ends with serious mental damage and death. There is no known cause for AD.

The first sign of AD may be memory problems; mild forgetfulness of things such as names, recent events, places, and familiar people or things. As the disease progresses simple things like brushing teeth or combing hair become harder to remember and thinking is not logical. Those affected begin to experience problems with speaking, understanding, reading, or writing. People with AD can become aggressive, anxious, or nervous and some with AD need full time care.

Data Summary

It is estimated that up to 4 million Americans suffer from AD. (National Institute of Aging: Department of Health and Human Services). Age is the most important known risk factor for AD. Most people with AD are over 65 years old. The chance of getting AD increases as an individual gets older. As of 1999, 44,536 people in the United States died due to AD. It is estimated that 1 in 10 persons over 65 and roughly half of those over 85 have AD (Alzheimer's Alliance).

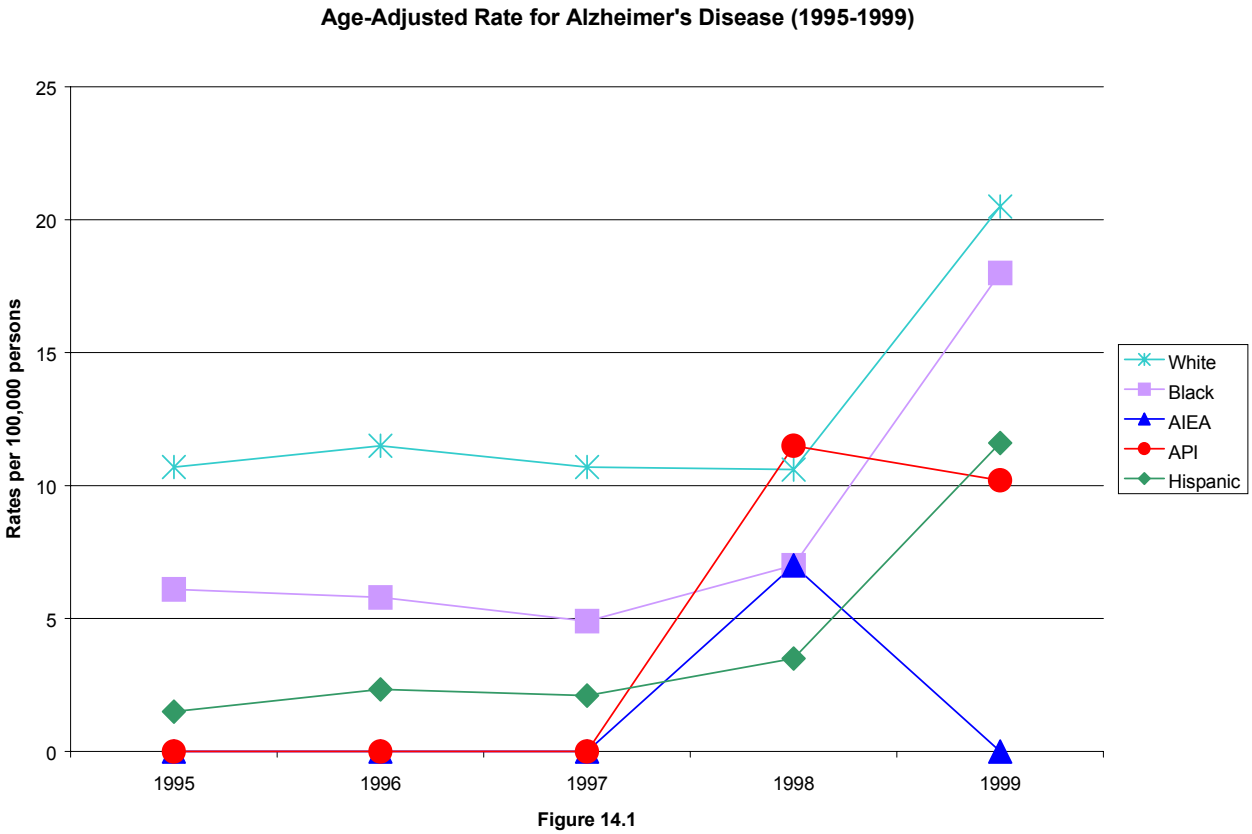

Figure 14.1

Comparisons- Race/Ethnic Group

There is a crucial need for increased research to find the unknown factors that generate the differences in risk and occurrences of AD in racial and ethnic minorities.

The 1999 U.S. ranking for deaths due to AD in the population age 65+:

Race/Ethnicity	Rank[15]	Number[15]
Whites	8th	41,877
African Americans	11th	2,307
Native American Indian/Alaska Native	10th	83
Asian American/Pacific Islander	11th	225
Hispanics	9th	963

Special Note

Healthy People 2010 did not have a specific goal for Alzheimer's disease death rate.

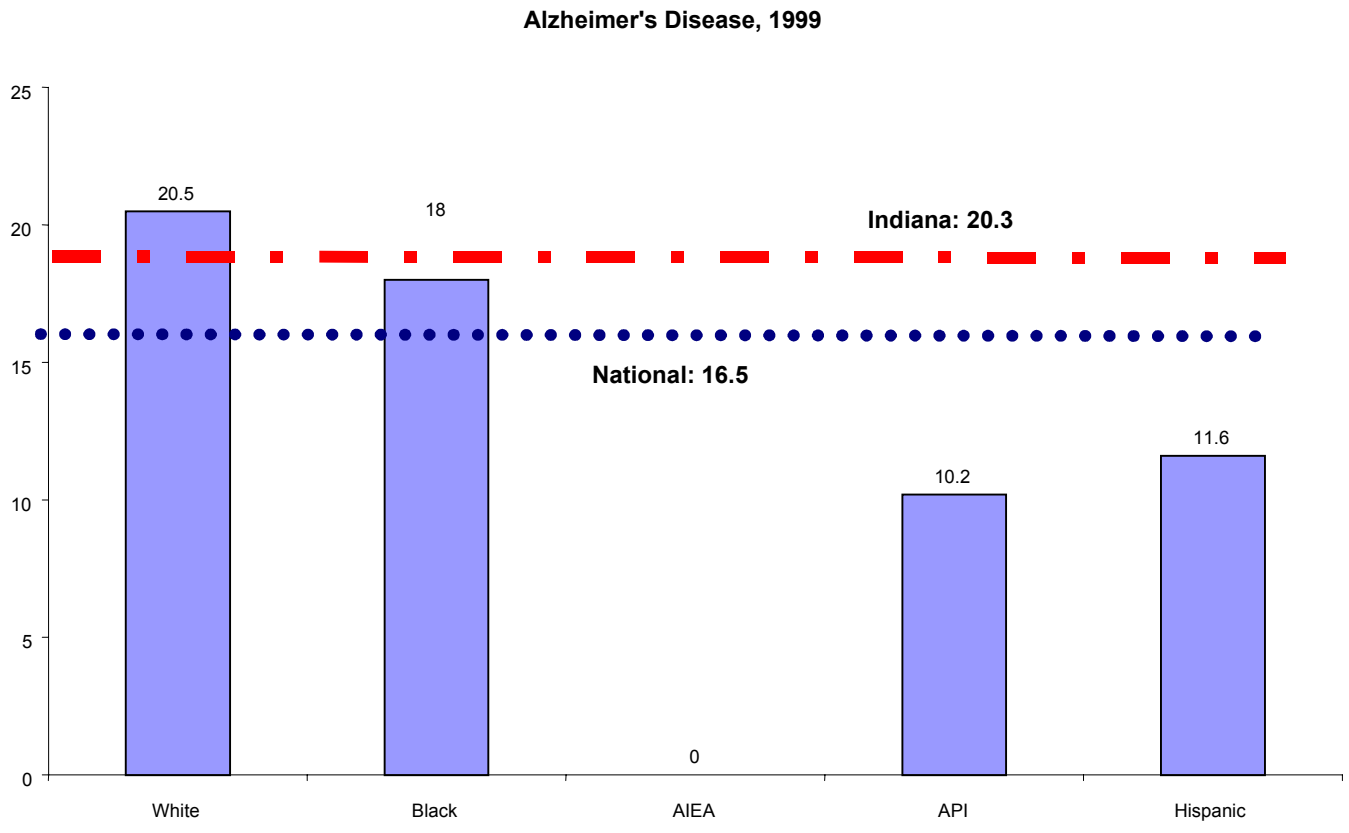

Figure 14.2

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

[15] *National Center for Injury Prevention and Control*

ICD 9: 038 **ICD 10: A40-A41**

Septicemia

Review

Septicemia is defined as the presence of bacteria in the blood (bacteremia) and is often associated with severe disease. The common name for septicemia is blood poisoning. Septicemia is a serious, rapidly progressing, life-threatening infection that can arise from infections throughout the body, including infections in the lungs, abdomen, and urinary tract.

Data Summary

In 1999, septicemia was the 10th leading cause of death. In the U.S, 30,680 people died from septicemia. Of people who develop septicemia, 20% die from it.

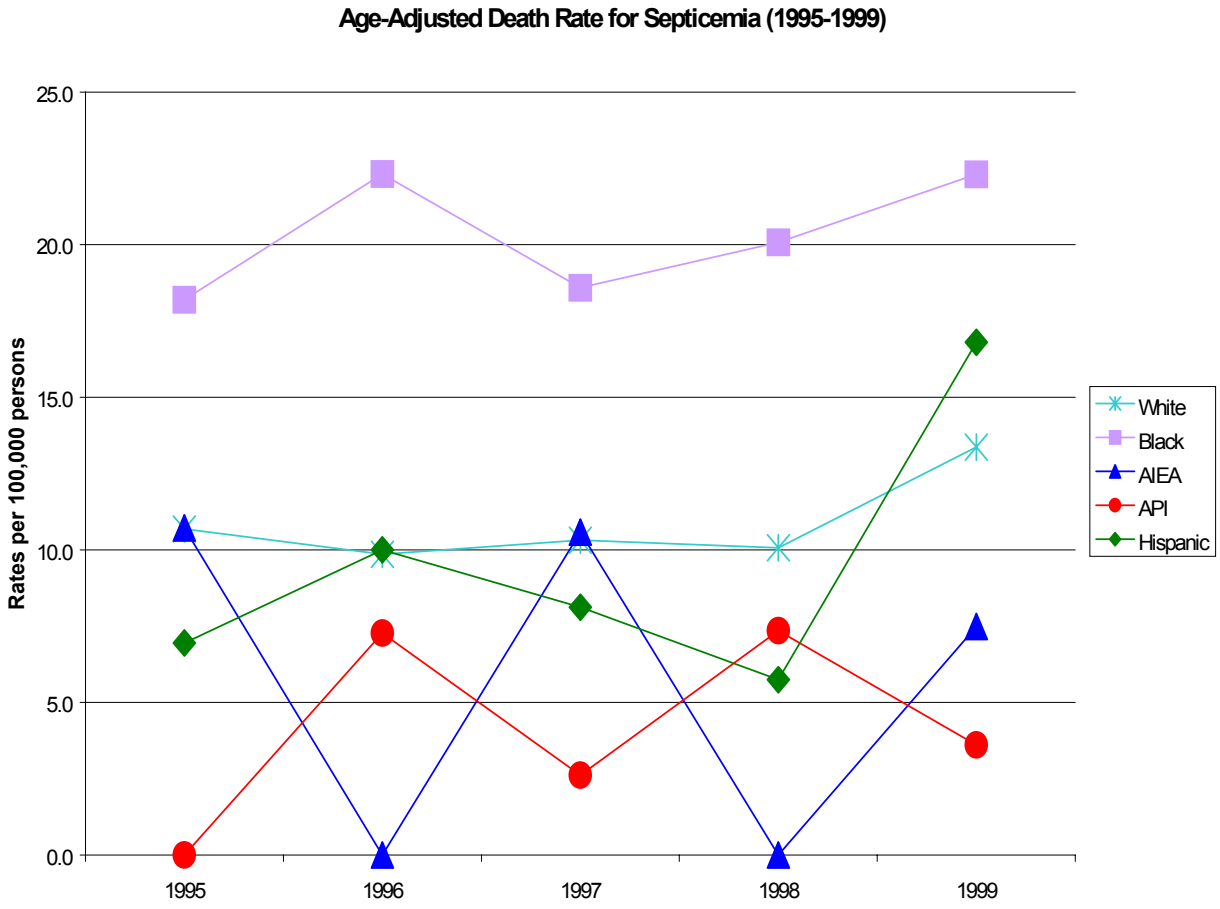

Figure 15.1

Comparisons- Race/Ethnic Group

Data regarding septicemia in racial and ethnic minority groups is sparse. The National Center for Injury Prevention and Control provided the 1999 rankings and numbers of people who died in each racial and ethnic group from septicemia:

Race/Ethnicity	Rank	Number
Whites	11th	24,287
African Americans	11th	5,826
Native American Indian/Alaska Native	12th	169
Asian American/Pacific Islander	10th	398
Hispanics	15th	1,215

Special Note

Healthy People 2010 does not have a specific goal in reducing deaths due to septicemia.

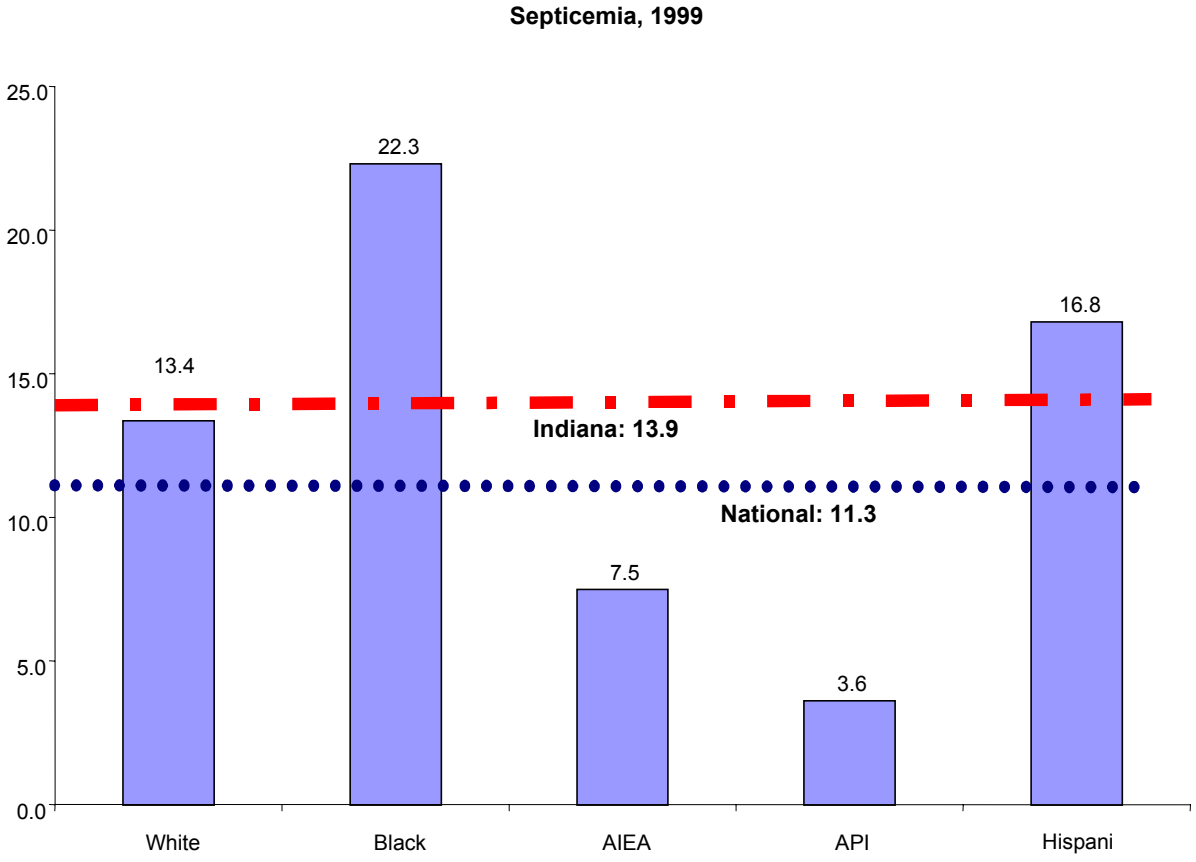

Figure 15.2

* Numbers vary due to population of race or ethnic group being compared
* Race and Ethnic groups are based on Indiana's Mortality Report 1999
* Rates are per 100,000 population
* Total death numbers that are below 20 are not statistically sound
* Hispanic is an ethnicity and it includes all races

Years of Potential Life Lost

Years of potential life lost (YPLL) is a measurement of premature mortality. When looking at specific-state mortality rates, YPLL can be most helpful for planning and evaluating local public health interventions. Examining race specific YPLL rates can be used to target and monitor those populations at highest risk.

In order to determine YPLL you must take into account life expectancy. Race, sex, or other characteristics using age-specific death rates for the population with that characteristic may determine life expectancy. NCHS definition of YPLL is presented for persons under 75 years of age because the average life expectancy in the United States is over 75 years, 76.7 to be exact (in 1998). YPLL for persons under 75 is calculated using the following eight age groups: under 1 year, 1-14 years, 15-24 years, 25-34 years, 35-44 years, 45-54 years, 55-64 years, 65-74 years. The number of deaths for each age group is multiplied by the years of life lost, calculated as the difference between age 75 years and the midpoint of the age group. Summing years of life lost over all age groups derives YPLL (YPLL data provided by the National Vital Statistics System and the 2001 Health, United States CDC publications)

The following YPLL tables are Indiana specific and show years lost due to the causes of death that were chosen for this report. Ranking of each race and ethnicity YPLL is in bold. Also, it is important to remember that Hispanic/Latino is an ethnicity and includes all races.

1999 YPLL in Indiana

Leading Cause of Death	Total	AfrA/B	AI/EA	A/PI	White	H/L
Heart Disease	**3** 55,009	**4** 6,040	**5** 28	**3** 143	3 48,793	5 643
Malignant Neoplasm/ Cancer	**1** 100,588	**1** 9,515	**4** 42	**1** 359	**1** 90,534	**3** 1,022
Cerebrovascular/Stroke	**8** 11,429	**6** 1,885	**-** 0	**8** 27	**7** 9,486	**6** 456
Chronic Obstructive Pulmonary Disease (COPD)	**7** 13,503	**9** 1,345	**-** 0	**12** 6	**6** 12,147	**14** 63
Unintentional Injuries/ Accidents	**2** 61,418	**3** 6,590	**1** 46	**2** 158	**2** 54,529	**1** 2,234
Pneumonia and Influenza	**13** 4,414	**14** 650	**-** 0	**9** 26	**12** 3,671	**10** 144
Diabetes	**9** 10,281	**7** 1,838	**-** 0	**10** 22	**8** 8,380	**9** 184
Suicide	**5** 19,802	**8** 1,578	**1** 46	**4** 117	**4** 18,016	**7** 324
Nephritis/ Kidney Disease	**11** 4,669	**11** 1,008	**-** 0	**11** 16	**13** 3,645	**13** 72
Cirrhosis/ Liver Disease	**10** 6,720	**12** 816	**-** 0	**7** 47	**10** 5,858	**8** 225
Homicide	**6** 16,864	**2** 8,912	**1** 46	**6** 51	**9** 7,763	**4** 764
HIV/AIDS	**14** 3,733	**10** 1,137	**-** 0	**-** 0	**14** 2,596	**11** 137

Conditions that Occur During the Perinatal Period	**4** 23,776	**5** 5,886	**-** 0	**5** 75	**5** 17,593	**2** 1,341
Alzheimer's Disease	**15** 653	**15** 17	**-** 0	**12** 6	**15** 631	**15** 0
Septicemia	**12** 4,448	**13** 726	**6** 16	**-** 0	**11** 3,691	**12** 121

Indiana Minority Population

Top Five Indiana Counties with the Highest Native American Indian/Alaska Native

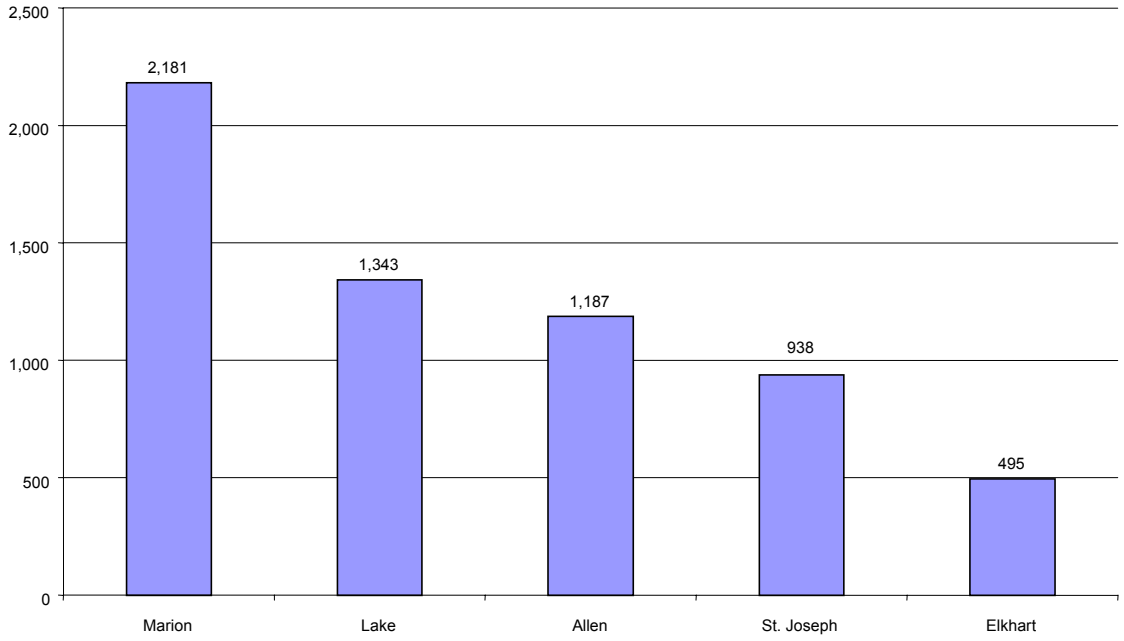

Figure 16.1

Top Five Indiana Counties with the Highest Asian American/Pacific Islander Population

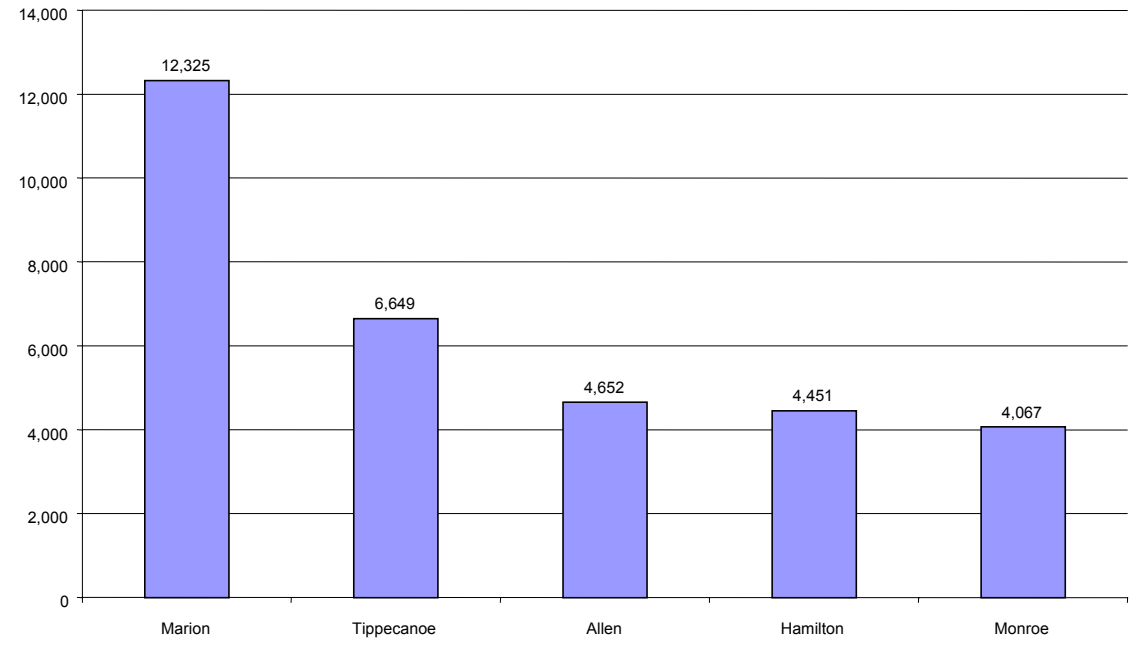

Figure 16.2

* Source: US Census Bureau and Indiana Business Research Center; 2000

Top Five Indiana Counties with the Highest Black/African-American Population

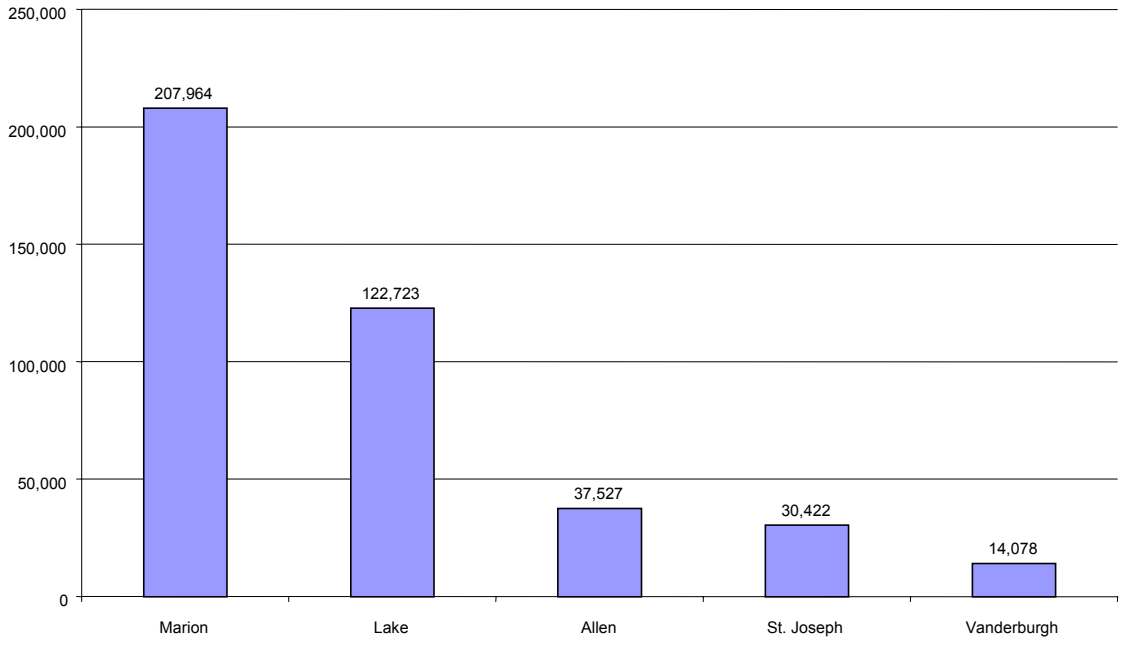

Figure 16.3

Top Five Indiana Counties With the Highest White Population

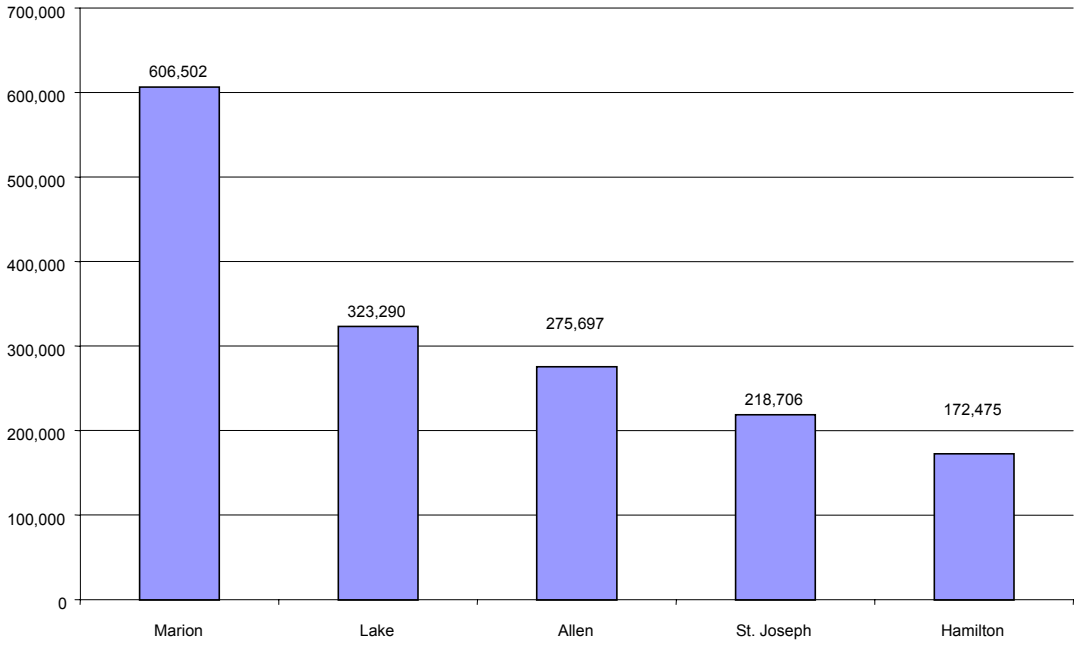

Figure 16.4

* Source: US Census Bureau and Indiana Business Research Center; 2000

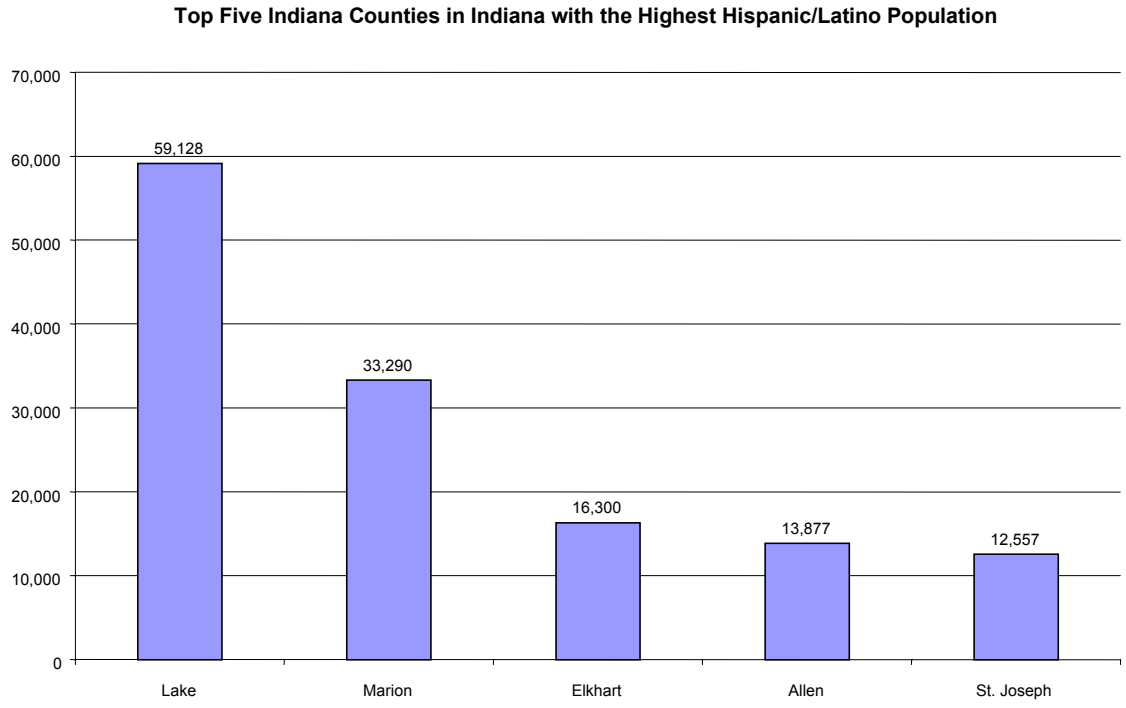

Figure 16.5

* Source: US Census Bureau and Indiana Business Research Center; 2000

Leading Causes of Death for Racial/Ethnic Minorities
Selected Counties, 1995-1999

Allen County

Rank	Cause of Death	**Total**
1	Heart disease	3,924
2	Malignant neoplasms	3,159
3	Cerebrovascular disease	840
4	Accidents and adverse effects	572
5	COPD/CLRD	563
6	Diabetes	355
7	Pneumonia and influenza	334
8	Nephritis, nephrotic syndrome, and nephrosis	257
9	Suicide	159
10	Alzheimers	140
	Total	12,584

Rank	Cause of Death	**White**
1	Heart disease	3,631
2	Malignant neoplasms	2,845
3	Cerebrovascular disease	770
4	COPD/CLRD	538
5	Accidents and adverse effects	501
6	Pneumonia and influenza	305
7	Diabetes	290
8	Nephritis, nephrotic syndrome, and nephrosis	223
9	Suicide	142
10	Alzheimers	136
	Total	11,323

Rank	Cause of Death	**Black**
1	Malignant neoplasms	301
2	Heart disease	281
3	Cerebrovascular disease	69
3	Accidents and adverse effects	69
3	Homicide	69
6	Diabetes	64
7	Nephritis, nephrotic syndrome, and nephrosis	32
8	Certain conditions originating in the perinatal period	31
9	Pneumonia and influenza	27
10	COPD/CLRD	25
	Total	1,213

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Heart disease	4
2	Malignant neoplasms	2
3	Cerebrovascular disease	1
3	Nephritis, nephrotic syndrome, and nephrosis	1
3	Septicemia	1
	Total	11

Rank	Cause of Death	**A/PI**
1	Heart disease	7
1	Malignant neoplasms	7
3	Suicide	2
4	Accidents and adverse effects	1
4	Diabetes	1
4	Pneumonia and influenza	1
4	Chronic liver disease and cirrhosis	1
4	Atherosclerosis	1
	Total	22

Rank	Cause of Disease	**Hispanic/ Latino**
1	Heart disease	17
1	Malignant neoplasms	17
3	Accidents and adverse effects	14
4	Homicide	4
5	Certain conditions originating in the perinatal period	3
5	Congenital anomalies	3
7	Cerebrovascular disease	2
7	COPD/ CLRD	2
7	Diabetes	2
7	Nephritis, nephrotic syndrome, and nephrosis	2
7	Suicide	2
7	Chronic liver disease and cirrhosis	2
	Total	90

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Elkhart County

Rank	Cause of Death	**Total**
1	Heart disease	2,078
2	Malignant neoplasms	1,488
3	Cerebrovascular disease	569
4	Accidents and adverse effects	353
5	COPD/CLRD	351
6	Pneumonia and influenza	200
7	Diabetes	194
8	Alzheimers	118
9	Suicide	78
10	Nephritis, nephrotic syndrome, and nephrosis	70
	Total	6,711

Rank	Cause of Death	**White**
1	Heart disease	1,998
2	Malignant neoplasms	1,423
3	Cerebrovascular disease	548
4	COPD/CLRD	344
5	Accidents and adverse effects	317
6	Pneumonia and influenza	195
7	Diabetes	185
8	Alzheimers	117
9	Suicide	72
10	Nephritis, nephrotic syndrome, and nephrosis	66
	Total	6,405

Rank	Cause of Death	**Black**
1	Heart disease	76
2	Malignant neoplasms	63
3	Accidents and adverse effects	32
4	Cerebrovascular disease	21
5	Homicide	20
6	Certain conditions originating in the perinatal period	11
7	COPD/CLRD	7
7	Diabetes	7
9	Pneumonia and influenza	5
9	Suicide	5
	Total	281

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Heart disease	2
	Total	4

Rank	Cause of Death	**A/PI**
1	Accidents and adverse effects	2
1	Diabetes	2
3	Heart disease	1
3	Malignant neoplasms	1
3	Nephritis, nephrotic syndrome, and nephrosis	1
3	Suicide	1
3	Septicemia	1
3	Certain conditions originating in the perinatal period	1
3	Congenital anomalies	1
	Total	11

Rank	Cause of Death	**Hispanic/Latino**
1	Accidents and adverse effects	13
2	Malignant neoplasms	9
3	Certain conditions originating in the perinatal period	6
4	Heart disease	4
5	Homicide	3
5	Congenital anomalies	3
7	COPD/CLRD	2
7	Diabetes	2
7	Pneumonia and influenza	2
7	HIV	2
7	Nutritional deficiencies	2
	Total	56

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Lake County

Rank	Cause of Death	**Total**
1	Heart disease	7,376
2	Malignant neoplasms	5,574
3	Cerebrovascular disease	1,464
4	Accidents and adverse effects	1,113
5	COPD/CLRD	890
6	Diabetes	847
7	Homicide	584
8	Pneumonia and influenza	450
9	Nephritis, nephrotic syndrome, and nephrosis	369
10	Septicemia	352
	Total	23,104

Rank		**White**
	Cause of Death	
1	Heart disease	5,582
2	Malignant neoplasms	4,214
3	Cerebrovascular disease	1,039
4	COPD/CLRD	755
5	Accidents and adverse effects	732
6	Diabetes	553
7	Pneumonia and influenza	358
8	Septicemia	248
9	Nephritis, nephrotic syndrome, and nephrosis	240
10	Chronic liver disease and cirrhosis	207
	Total	16,853

Rank	Cause of Death	**Black**
1	Heart disease	1,766
2	Malignant neoplasms	1,338
3	Homicide	465
4	Cerebrovascular disease	418
5	Accidents and adverse effects	370
6	Diabetes	290
7	COPD/CLRD	130
8	Nephritis, nephrotic syndrome, and nephrosis	128
9	Certain conditions originating in the perinatal period	105
10	Septicemia	103
	Total	6,151

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Heart disease	9
2	Malignant neoplasms	7
3	Suicide	2
3	Certain conditions originating in the perinatal period	2
5	Cerebrovascular disease	1
5	Diabetes	1
5	Homicide	1
5	Nephritis, nephrotic syndrome, and nephrosis	1
5	Chronic liver disease and cirrhosis	1
5	Viral Hepatitis	1
	Total	26

Rank	Cause of Death	**A/PI**
1	Malignant neoplasms	13
2	Heart disease	11
3	Accidents and adverse effects	5
4	Cerebrovascular disease	3
5	COPD/CLRD	1
5	Homicide	1
5	Suicide	1
5	Septicemia	1
5	Chronic liver disease and cirrhosis	1
5	Congenital anomalies	1
5	Benign neoplasms	1
	Total	41

Rank	Cause of Death	**Hispanic/Latino**
1	Heart disease	207
2	Malignant neoplasms	136
3	Accidents and adverse effects	55
4	Diabetes	49
5	Cerebrovascular disease	45
6	Homicide	32
7	Chronic liver disease and cirrhosis	25
8	Certain conditions originating in the perinatal period	22
9	COPD/CLRD	20
10	Pneumonia and influenza	17
	Total	774

*Causes of death ranked the same are tied

* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Marion County

Rank	Cause of Death	**Total**
1	Heart disease	10,947
2	Malignant neoplasms	8,877
3	Cerebrovascular disease	2,230
4	COPD/CLRD	2,078
5	Accidents and adverse effects	1,601
6	Pneumonia and influenza	1,180
7	Diabetes	978
8	Homicide	634
9	Suicide	601
10	Septicemia	565
	Total	38,223

Rank	Cause of Death	**White**
1	Heart disease	8,648
2	Malignant neoplasms	6,836
3	Cerebrovascular disease	1,827
4	COPD/CLRD	1,807
5	Accidents and adverse effects	1,159
6	Pneumonia and influenza	983
7	Diabetes	596
8	Suicide	505
9	Septicemia	413
10	Atherosclerosis	374
	Total	29,266

Rank	Cause of Death	**Black**
1	Heart disease	2,258
2	Malignant neoplasms	2,002
3	Homicide	439
4	Accidents and adverse effects	425
5	Cerebrovascular disease	396
6	Diabetes	376
7	COPD/CLRD	267
8	Pneumonia and influenza	194
9	Nephritis, nephrotic syndrome, and nephrosis	175
10	Certain conditions originating in the perinatal period	166
	Total	8,790

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Heart disease	6
2	Malignant neoplasms	3
3	Suicide	2
3	Septicemia	2
5	Accidents and adverse effects	1
5	Pneumonia and influenza	1
	Total	18

Rank	Cause of Death	**A/PI**
1	Malignant neoplasms	25
2	Heart disease	22
3	Accidents and adverse effects	6
4	Cerebrovascular disease	5
4	Diabetes	5
6	Suicide	4
7	COPD/CLRD	2
7	Chronic liver disease and cirrhosis	2
9	Pneumonia and influenza	1
9	Homicide	1
9	Nephritis, nephrotic syndrome, and nephrosis	1
9	Certain conditions originating in the perinatal period	1
9	Hypertension with or w/o renal disease	1
9	Congenital anomalies	1
9	Benign neoplasms	1
9	Anemias	1
9	Tuberculosis	1
	Total	95

Rank	Cause of Death	**Hispanic/Latino**
1	Heart disease	33
2	Malignant neoplasms	28
2	Accidents and adverse effects	28
4	Certain conditions originating in the perinatal period	14
5	Homicide	8
6	Cerebrovascular disease	7
7	Chronic liver disease and cirrhosis	6
8	Suicide	4
9	Diabetes	3
10	COPD/CLRD	2
10	Pneumonia and influenza	2
10	Nephritis, nephrotic syndrome, and nephrosis	2
10	Hypertension with or w/o renal disease	2
10	Congenital anomalies	2
10	Tuberculosis	2
	Total	166

*Causes of death ranked the same are tied

* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

St. Joseph County

Rank	Cause of Death	**Total**
1	Heart disease	3,688
2	Malignant neoplasms	2,865
3	Cerebrovascular disease	949
4	COPD/CLRD	569
5	Accidents and adverse effects	469
6	Pneumonia and influenza	398
7	Diabetes	372
8	Alzheimers	196
9	Nephritis, nephrotic syndrome, and nephrosis	157
10	Suicide	123
	Total	12,056

Rank	Cause of Death	**White**
1	Heart disease	3,386
2	Malignant neoplasms	2,577
3	Cerebrovascular disease	848
4	COPD/CLRD	533
5	Accidents and adverse effects	395
6	Pneumonia and influenza	373
7	Diabetes	305
8	Alzheimers	184
9	Nephritis, nephrotic syndrome, and nephrosis	128
10	Atherosclerosis	116
	Total	10,822

Rank	Cause of Death	**Black**
1	Heart disease	298
2	Malignant neoplasms	277
3	Cerebrovascular disease	99
4	Accidents and adverse effects	69
5	Diabetes	66
5	Homicide	66
7	COPD/CLRD	36
8	Nephritis, nephrotic syndrome, and nephrosis	28
9	Pneumonia and influenza	24
10	Certain conditions originating in the perinatal period	21
	Total	1,199

*Causes of death ranked the same are tied

* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Accidents and adverse effects	3
2	Malignant neoplasms	2
3	Heart disease	1
	Total	8

Rank	Cause of Death	**A/PI**
1	Malignant neoplasms	8
2	Heart disease	2
2	Cerebrovascular disease	2
2	Accidents and adverse effects	2
2	Congenital anomalies	2
6	Diabetes	1
6	Pneumonia and influenza	1
6	Homicide	1
6	Nephritis, nephrotic syndrome, and nephrosis	1
6	Human immunodeficiency virus infection	1
6	Hypertension with or w/o renal disease	1
	Total	23

Rank	Cause of Death	**Hispanic/Latino**
1	Malignant neoplasms	15
2	Heart disease	13
3	Accidents and adverse effects	9
4	Diabetes	5
4	Homicide	5
4	Chronic liver disease and cirrhosis	5
7	Congenital anomalies	4
8	Suicide	3
9	Cerebrovascular disease	2
9	Pneumonia and influenza	2
9	Certain conditions originating in the perinatal period	2
	Total	82

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Vanderburgh County

Rank	Cause of Death	**Total**
1	Heart disease	2,975
2	Malignant neoplasms	2,145
3	Cerebrovascular disease	755
4	COPD/CLRD	468
5	Accidents and adverse effects	393
6	Pneumonia and influenza	263
7	Diabetes	230
8	Nephritis, nephrotic syndrome, and nephrosis	152
9	Suicide	123
10	Alzheimers	114
	Total	9,346

Rank	Cause of Death	**White**
1	Heart disease	2,783
2	Malignant neoplasms	1,988
3	Cerebrovascular disease	702
4	COPD/CLRD	458
5	Accidents and adverse effects	353
6	Pneumonia and influenza	248
7	Diabetes	200
8	Nephritis, nephrotic syndrome, and nephrosis	129
9	Suicide	119
10	Alzheimers	110
	Total	8,656

Rank	Cause of Death	**Black**
1	Heart disease	185
2	Malignant neoplasms	152
3	Cerebrovascular disease	50
4	Accidents and adverse effects	36
5	Diabetes	30
6	Nephritis, nephrotic syndrome, and nephrosis	23
7	Pneumonia and influenza	15
8	Homicide	13
9	COPD/CLRD	10
10	Hypertension with or w/o renal disease	9
	Total	664

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

Rank	Cause of Death	**AI/EA**
1	Heart disease	2
2	Accidents and adverse effects	1
2	Chronic liver disease and cirrhosis	1
	Total	5

Rank	Cause of Death	**A/PI**
1	Malignant neoplasms	3
1	Cerebrovascular disease	3
3	Heart disease	2
3	Accidents and adverse effects	2
	Total	12

Rank	Cause of Death	**Hispanic/Latino**
1	Malignant neoplasms	5
2	Heart disease	3
3	Cerebrovascular disease	2
4	Accidents and adverse effects	1
4	Diabetes	1
4	Septicemia	1
4	Congenital anomalies	1
	Total	15

*Causes of death ranked the same are tied
* Total numbers may not reflect all of the deaths listed. Those numbers not shown are unknown or other causes of deaths.

LIMITATIONS, SUGGESTIONS, and SUMMARY

One of the goals of this report is to describe those limitations and problems that exist with current data and offer suggestions to public health workers, providers, and local communities. These issues are addressed in the following sections.

Limitations

- Race and ethnicity categories are simplifications of complex issues.

In compliance with the U.S. Office of Management and Budget (OMB), all organizations, supported by government funds must report race, including those that provide health services. It is the individual client's right to declare what his/her race or ethnicity is. It is important to remember that genetics, culture, and socioeconomic statuses contribute to the "race" categorization. The 2000 Census was the first major reporting entity that allowed an individual to choose more than one race or ethnicity. For constituents, this was an improvement. For data collectors, reporters, researchers, etc., this causes some difficulties. The question now is, how do we classify certain conditions, or diseases, or other health concerns when looking at race outcomes?

- Reporting entities do not consistently report race and ethnicity data.

The problem is that for whatever reason, all healthcare providers do not report race. Such great inconsistencies create gaps in reporting and collecting data.

- Most agencies have not updated statistical information on minorities.

Although the 2000 Census data are available, some organizations continue to use 1990 Census data, which are not as inclusive of minorities as the 2000 Census.

- Race and ethnicity are considered causes of illness, instead of risk factors.

There are health conditions that have higher rates of incidence within a specific population. These associations should not be interpreted as indicating causation, or as an excuse for stereotyping. As stated above, race is very complicated and may be seen as a surrogate for some other risk factor or cause.

- Lack of consensus among reporting entities when defining and measuring race and ethnicity

Federal health statistics are provided by different agencies. NCHS is the primary source, but organizations are not always consistent in keeping current statistical data. Thus data collection is not always measured by a common standard or defined the same. Federal, state, and local agencies all have distinct ways of reporting data, rather than one set standard. These multiple standards create confusion with data collection and reporting.

- Death certificate classifications can lead to lower minority numbers.

When examining race from death records, it is important to note that race is not self-reported. The physician or coroner who sees the deceased last will record the race. There is no guarantee that the coroner or physician will report the same race as the deceased would have. This could explain some of the low numbers among Native American Indians/Alaska Natives and Hispanics or Latinos.

Suggestions

- By tracking race, ethnicity, and socioeconomic status, researchers can determine causative agents or reasons that morbidity and mortality differ between particular racial and ethnic subgroups. Involving communities in all stages of research is very important. This allows health representatives to be more efficient in data collection and better able to formulate surveys and questionnaires that are culturally competent. For example, using focus groups, having town meetings, or finding gatekeepers in the community, translating flyers, brochures, and pamphlets in the target population's native tongue can allow you to develop forms that reflect the mind-set, feelings, and actions of minority populations, thus producing better participation and results than expected. One crucial note is continuing the established partnership. Just coming in getting the data, and leaving makes the community feel used and reluctant to participate the next time or allow other researchers to come in.

- Develop a protocol for federal, state, and local health agencies to ensure accurate and consistent reporting of a persons race and ethnicity. Consistency is key to being more effective. Standard reporting measures and creating effective guidelines on how to collect, research, and report data will make a difference.

- Health agencies and representatives should become culturally competent to help in eliminating health disparities and providing necessary programs to at-risk health populations.

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http://www.niddk.nih.gov/

National Institutes of Health (NIH)
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http://www.cancer.org/

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http://www.lungusa.org/

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National Institute on Alcohol Abuse and Alcoholism

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http://www.census.gov/

National Institute of Allergy and Infectious Disease; National Institute of Health
http://www.niaid.nih.gov/default.htm

National Center for Injury Prevention & Control Home Page
http://www.cdc.gov/ncipc/default.htm

American Stroke Association

http://www.strokeassociation.org/presenter.jhtml?identifier=1200037

Medline Plus
http://medlineplus.gov/

Alzheimer's Association

http://www.alz.org/media/positions/racerisk.htm

American Association of Suicidology
http://www.suicidology.org/

Appendix A

Age-Adjusted Rates for the Leading Causes of Death in Indiana, by Race, (1995-1999)

Heart Disease

	1995	1996	1997	1998	1999
White	230.3	222.2	215.0	203.2	200.5
Black	269.1	244.0	227.7	246.4	243.5
AI/EA	33.7	44.2	28.5	17.2	76.8
A/PI	85.3	64.5	79.2	71.1	89.0
Hispanic/Latino	102.8	97.8	78.5	71.0	124.9

Cancer

	1995	1996	1997	1998	1999
White	219.8	216.0	211.8	212.4	213.7
Black	279.0	289.2	283.6	295.4	283.8
AI/EA	5.6	95.6	74.8	94.7	42.4
A/PI	95.9	77.7	115.7	85.5	108.2
Hispanic/Latino	114.1	88.4	72.4	76.5	112.7

COPD/ CLRD

	1995	1996	1997	1998	1999
White	43.4	46.7	48.2	48.3	52.0
Black	32.4	33.8	27.4	34.3	42.3
AI/EA	0.0	10.8	0.0	0.0	6.6
A/PI	0.0	16.6	0.0	7.7	16.4
Hispanic/Latino	19.8	10.0	10.8	9.4	19.5

Conditions During the Perinatal Period

	1995	1996	1997	1998	1999
White	4.3	4.5	4.5	4.1	4.4
Black	14.7	13.4	12.5	14.5	13.1
AI/EA	0.0	0.0	0.0	29.2	0.0
A/PI	1.5	7.4	1.4	2.5	1.2
Hispanic/Latino	7.3	5.7	7.1	5.4	6.9

Cirrhosis

	1995	1996	1997	1998	1999
White	6.9	7.5	7.3	8.0	7.3
Black	12.4	10.6	9.4	9.6	9.0
AI/EA	6.9	8.3	10.6	0.0	0.0
A/PI	0.0	0.0	4.2	3.8	7.9
Hispanic/ Latino	8.4	6.5	17.4	15.8	11.9

Diabetes

	1995	1996	1997	1998	1999
White	23.7	24.4	23.8	22.7	25.4
Black	61.7	58.1	59.4	54.6	58.7
AI/EA	0.0	23.4	0.0	7.2	6.6
A/PI	18.5	18.8	22.3	28.3	21.0
Hispanic/Latino	34.2	29.1	25.8	13.7	29.6

HIV/AIDS

	1995	1996	1997	1998	1999
White	5.5	2.9	2.0	1.2	1.4
Black	19.6	15.6	10.1	7.5	7.3
AI/EA	0.0	0.0	5.4	0.0	0.0
A/PI	0.0	1.8	0.0	0.0	0.0
Hispanic/Latino	8.0	0.0	2.3	1.5	1.6

Homicide

	1995	1996	1997	1998	1999
White	3.8	2.8	3.5	3.3	3.3
Black	47.5	43.4	46.3	41.1	36.2
AI/EA	0.0	5.9	0.0	0.0	5.0
A/PI	1.7	3.4	0.0	1.3	4.8
Hispanic/Latino	10.5	6.4	11.9	4.0	10.1

Kidney Disease

	1995	1996	1997	1998	1999
White	11.6	12.3	12.7	13.1	16.8
Black	25.8	29.8	26.3	29.8	35.5
AI/EA	0.0	15.1	10.6	0.0	0.0
A/PI	5.0	11.6	0.0	7.4	8.9
Hispanic/Latino	8.2	9.2	3.5	7.5	10.9

Pneumonia and Influenza

	1995	1996	1997	1998	1999
White	33.6	31.1	32.0	31.8	17.4
Black	38.0	28.8	25.9	29.0	17.8
AI/EA	8.1	0.0	0.0	0.0	6.6
A/PI	6.9	9.0	10.4	15.0	14.8
Hispanic/Latino	24.1	8.5	16.1	8.1	11.7

Stroke

	1995	1996	1997	1998	1999
White	72.6	70.9	67.5	66.3	66.8
Black	82.9	83.8	78.6	89.0	85.3
AI/EA	13.2	0.0	18.9	7.2	6.6
A/PI	20.3	47.9	31.9	27.6	16.1
Hispanic/Latino	28.7	34.2	32.2	24.8	38.0

Suicide

	1995	1996	1997	1998	1999
White	12.5	12.8	12.7	12.0	10.7
Black	5.2	9.4	8.7	8.0	7.9
AI/EA	8.1	5.9	12.9	5.5	5.0
A/PI	1.7	14.6	4.6	6.4	4.6
Hispanic/Latino	5.2	11.5	5.4	1.6	5.3

Unintentional Injuries

	1995	1996	1997	1998	1999
White	35.8	33.7	33.8	34.4	37.7
Black	40.5	37.1	31.1	45.5	43.9
AI/EA	28.9	6.8	12.4	20.0	11.5
A/PI	29.5	30.1	13.7	22.8	15.9
Hispanic/Latino	25.6	28.3	20.5	26.1	38.4

Alzheimer's Disease

	1995	1996	1997	1998	1999
White	10.7	11.5	10.7	10.6	20.5
Black	6.1	5.8	4.9	7.0	18.0
AI/EA	0	0	0	7.0	0
A/PI	0	0	0	11.5	10.2
Hispanic/Latino	1.5	2.33	2.1	3.5	11.6

Septicemia

	1995	1996	1997	1998	1999
White	10.7	9.9	10.3	10.1	13.4
Black	18.2	22.3	18.6	20.1	22.3
AI/EA	10.7	0.0	10.6	0.0	7.5
A/PI	0.0	7.3	2.6	7.4	3.6
Hispanic/Latino	6.9	10.0	8.1	5.7	16.8

Appendix B

Economics of Health Disparities in Indiana

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Using 1999 Indiana Hospital Discharge Data to calculate total inpatient charges for the leading chronic diseases and age-adjusted* mortality rates for Indiana for 2000 to calculate the disparity between the white population and the black population, we can obtain a very rough estimate of some of the costs of health disparities in Indiana.

From the 2000 Census, black or African Americans comprise 8.4% of the Indiana population. Some examples of the top leading causes of death plaguing the Black population are: heart disease, cancer, cerebrovascular diseases (predominantly stroke), and diabetes mellitus.

Heart Disease

Black mortality 323.74/100,000
White mortality 270.27/100,000
Ratio of Black to White = 1.20 or a 20% excess mortality in blacks

Total inpatient charges for heart disease = $1,379,849,079.45

.084 x $1,379,849,079.45 = $115,907,322.60 expected charges for black patients
$115,907,322.60 x 1.20 = $139,088,787.10 estimated total charges for black patients based on known disease disparity
$139,088,787.10 - $115,907,322.60 = $23,181,464.52 excess inpatient hospital charges due to health disparity in heart disease

Cancer

Black mortality 262.89/100,000
White mortality 213.52/100,000
Ratio of Black to White = 1.23or a 23% excess mortality in blacks

Total inpatient charges for cancer = $408,701,817.32

.084 x $408,701,817.32= $34,330,952.66 expected charges for black patients
$34,330,952.66 x 1.23 = $42,227,071.76 estimated total charges for black patients based on known disease disparity
$42,227,071.76 - $34,330,952.66 = $7,896,119.10 excess inpatient hospital charges due to health disparity in cancer

Cerebrovascular disease

Black mortality 86.55/100,000
White mortality 70.39/100,000
Ratio of Black to White = 1.23or a 23% excess mortality in blacks

Total inpatient charges for cerebrovascular disease = $247,447,095.86

.084 x $247,447,095.86= $20,785,556.05 expected charges for black patients
$20,785,556.05 x 1.23 = $25,566,233.94 estimated total charges for black patients based on known disease disparity
$25,566,233.94 - $20,785,556.05 = $4,780,677.89 excess inpatient hospital charges due to health disparity in cerebrovascular disease

Diabetes mellitus

Black mortality 54.54/100,000
White mortality 26.57/100,000
Ratio of Black to White = 2.05 or a 105% excess mortality in blacks

Total inpatient charges for diabetes = $87,640,704.10

.084 x $87,640,704.10 = $7,361,819.14 expected charges for black patients
$7,361,819.14 x 2.05 = $15,091,729.25 estimated total charges for black patients based on known disease disparity
$15,091,729.25 - $7,361,819.14 = $7,729,910.11 excess inpatient hospital charges due to health disparity in diabetes

Note: The excess burden of disease in Blacks for stroke and diabetes based on mortality rates agrees fairly well with calculations based on the self-reported prevalence in the Indiana 2000 BRFSS. (Stroke: Blacks 3.1%, Whites 2.5%, ratio B/W = 1.24 and Diabetes: Blacks 13.0%, Whites 5.7%, ratio B/W = 2.28)

The excess cost figures assume equal hospitalization rates and equal amount and types of treatments for Blacks as for Whites, which we know is not the case. Therefore, these are only very rough estimates of the excess health care costs due to disparities.

These calculations are based on those of Kevin Sherin, MD, MPH.